County Borough of Blackburn.

Annual Report

UPON THE

Health of Blackburn

For the Year 1926,

BY

OSCAR M. HOLDEN, M.D., D.P.H.,

Medical Officer of Health,
Administrative Tuberculosis Officer,
Medical Superintendent of the Corporation Hospitals,
School Medical Officer.

BUREAU OF HYGIENE
LIBRARY
23 JAN 1928
& TROPICAL DISEASES

BLACKBURN:
Thomas Briggs (Blackburn), Ltd., 73 Northgate.

County Borough of Blackburn.

ANNUAL REPORT

UPON THE

Health of Blackburn

For the Year 1926,

BY

OSCAR M. HOLDEN, M.D., D.P.H.,

Medical Officer of Health,
Administrative Tuberculosis Officer,
Medical Superintendent of the Corporation Hospitals,
School Medical Officer.

Bureau of Hygiene & Tropical Diseases
Library
23 JAN 1928

BLACKBURN:
Thomas Briggs (Blackburn), Ltd., 73 Northgate.

CONTENTS.

PAGE
Abattoir 160–168
After-Care, Tuberculosis 95–96
Ambulance Facilities 17
Ante-Natal Care 120–122
Anti-Toxin, Diphtheria 46
Ash Receptacles 191
Atmospheric Pollution 185–189
Anthrax 174
Arterio Sclerosis 30
Bacteriological and Pathological Examinations 75, 76, 160
Births 17, 126
Blind, Care of the 205, 206
Cancer 34–39
Cattle Market 176
Child Mortality 132–142
Cost of Public Health Department 10
Climate 11–14
Cleansing Station 205
Closet Accommodation 189
Common Lodging-houses 196
Contagious Diseases of Animals Acts 174–175
Conversions 189
Crippling 110
Dairies 179
Deaths 18
Dental Work 96, 97, 155, 156
Diarrhœa 51, 52
Diphtheria 49, 69–70
Disinfection 204
Dispensary—Tuberculosis 84, 85, 98–100, 108
Education on Health 212, 213
Enteric Fever 71
Factory and Workshops Acts 203–204
Farms 168–179
Food and Drugs Acts, Sale of 180–185
Food 157–185
Food, Preparing Places 178–179
Foot and Mouth Disease 174
Geology 10, 11
Hospital for Infectious Diseases 15, 16, 63–75
Hospital Accommodation 15
Hospital, Maternity 16, 127–128
Housing 191–195
Houses Let in Lodgings 195
Heart Disease 29
Home Nursing 211
Illegitimate Children 155
Infant Consultations 146–149
Infantile Mortality 132–142
Infectious Diseases 40–75
Infant Welfare Visitors' Work 146–155
Influenza 50, 51
Lavatory Accommodation 190
Local Acts 213
Maternity and Child Welfare 120–157
Maternity Hospital 16, 127–128
Marriages 17

PAGE
Measles 50, 71, 72
Meat Inspection 160–168
Meteorology 11–14
Midwives' Acts 142–146
Milk, Tuberculous 160, 170–172
Milk (Mothers and Children Order) 149–151
Milk 157, 158, 160, 168–173, 176, 177
Mortality in Connection with Child-birth 123–125
Natural Increase in Population 18
Neo-Natal Mortality 139–140
Notification of Births Acts 120
Notification of Infectious Diseases 40–48
Nuisances 198
Nurses, District 211
Offensive Trades 198
Ophthalmia of the Newly-born 130–131
Occupational Statistics 32–34, 37, 82
Parasitic Mange 175
Poor Relief 15
Population 26–28
Pregnancy, Deaths due to 123–125
Premature Births 126
Puerperal Sepsis 124, 125
Queen's Park Hospital 16, 17
Refuse, Collection of 191
Residential Open-Air School 74
Royal Infirmary 116
Respiratory Diseases 28–29
Rheumatism 29–31
Sanatorium 101–107
Sanitary Work, Details of 189–204
Scarlet Fever 48, 66–69
Scavenging 191
Sewers 190
Slaughter-houses 160–168
Smoke Nuisance 188–189
Staff 8
Still-Births 128–130
Smallpox 16, 52–63
Social Conditions 10, 15
Shellfish 158–160
Tents and Vans 196
Tuberculosis 77–110
Training of Tuberculous Ex-Servicemen 97
Tuberculosis Dispensary 87, 88, 98–100, 108
Ultra-Violet Light Clinic 206–210
Vans 196
Venereal Diseases 110–119
Veterinary Inspector's Report 160–176
Vital Statistics 17–33
Voluntary Organisations 210–211
Ward Statistics 21, 22, 32, 40, 42
Water 191
Whooping Cough 50
Workshops 200, 204
Workplaces 200
X-Ray Work 76, 97

Health & Maternity & Child Welfare Committee.

THE MAYOR (ALDERMAN SIR WILLIAM FORREST, O.B.E.)
ALDERMAN J. FIELDING, J.P., Chairman,
ALDERMAN F. J. GREEVES, J.P., L.R.C.P., Vice-Chairman,
ALDERMEN—
WATSON, J.P., SHORROCK, J.P., KEIGHLEY, J.P., M.D., & RAMSAY, J.P., L.R.C.P.
COUNCILLORS

BRADLEY, L.R.C.P.
FRYARS
CAMPBELL
DEAN
MAKIN, J.P.
CRITCHLEY
COWARD
HOLDEN (J.)
HEYES
ODDIE
GRIMSHAW
LUCAS
HURLEY
HOLDEN (B.)
SMETHURST

with the addition of
MRS. J. RAWLINSON, MISS K. HOWARD, MRS. M. WALSH,
and MRS. R. Y. AITKEN.

STAFF OF THE HEALTH DEPARTMENT:

Medical Officer of Health.
OSCAR M. HOLDEN, M.D., D.P.H.

Assistant Medical Officer of Health and Tuberculosis Officer.
G. C. F. ROE, L.R.C.P. & S.I., D.P.H., D.P.M.

Assistant Medical Officers of Health.
C. B. HOGG, M.B., Ch.B., M.D., D.P.H.
MISS ELLA G. F. MACKENZIE, M.A., M.B., Ch.B. (Edin.), D.P.H. (Birm.).

Veterinary Inspector and Chief Meat Inspector.
E. J. BURNDRED, M.C., M.R.C.V.S., D.V.H.
*JAMES GRAHAM, Chief Sanitary Inspector.
*W. H. GOODMAN, Assistant Meat Inspector.
*O. H. WILLIAMS, Special Inspector for Food and Drugs, etc.
*H. KENYON, Special Inspector for Factories and Workshops.
*A. LEES, Special Inspector for Drainage Work.

District Inspectors.
*J. W. MARGINSON. *W. WALNE. *ERNEST SEFTON.
*H. W. FOWLER.

Lady Health Visitors.
§†*Miss LOWE. §*Miss LANGLEY (died 27th June, 1926). §*Miss STANANOUGHT.
§‡†Miss BELL. §‡†*Miss LUNT. §‡†*Miss RUDD.
§‡†Miss CATLOW (from 1st October, 1926).

Matron, Corporation Hospital—§‡†Miss CRITCHLEY.
Matron, Springfield Maternity House—§‡†Miss RUSHTON (till 30th April, 1927).
§‡†Miss F. BAMBRIDGE (from 25th May, 1927).
Tuberculosis Nurse—§‡Miss E. NELSON.
Chief Clerk—THOMAS FOWLER.

Clerks.
§H. PEMBERTON (died 19th April, 1926). §H. WALSH. J. R. MARSDEN.
Miss E. COMBERBACH. §J. MARGINSON. Miss C. HAWORTH.
W. PARKER. §R. HAYHURST. C. AINSWORTH.

Disinfectors.
J. W. JOHNSON. F. HOLDEN.

---

*Holders of Certificates of the Royal Sanitary Institute.
†Certificated Midwives.
‡Trained Nurses.
§A contribution to the salaries of these Officers is made from Exchequer grants.

Public Health Offices,
Blackburn,
April, 1927.

To the Chairman and Members of the Health Committee of the County Borough of Blackburn.

Mr. Chairman and Gentlemen,

I have the honour to submit to you, in accordance with the Sanitary Officers Order, 1922, my Second Annual Report, being the forty-fifth of the series, for the year ending December 31st, 1926.

The arrangement follows that of last year's report. Each department of the work is dealt with *in toto* as a separate section, and all statistics relating to any particular branch are included in the section devoted to that branch.

I wish to tender my thanks to the Staff of the Health Department for the assistance they have rendered me in the compilation of the statistics, and for the creditable fashion in which they have, each and all, performed their various duties throughout the year.

My thanks are also due to you, Mr. Chairman, Ladies and Gentlemen, for the encouragement and support you have at all times given me since I commenced my duties in Blackburn.

I am,

Your obedient Servant,

OSCAR M. HOLDEN.

NATURAL AND SOCIAL CONDITIONS.

Area (in Acres)	7,649
Population (Census, 1921)	126,643
,, (Estimated middle of 1926)	124,400
,, (Census, March, 1926)	126,497
Number of Inhabited Houses (1921)	30,948
,, ,, ,, (1926)	31,994
Number of Families or Separate Occupiers (1921)	31,608
Rateable Value	£758,744
Sum Represented by a Penny Rate...	£2,700
Rate in the £ (excluding Water) 1925-6	14/4
Gross Expenditure on Health Social Services	£37,587
Income on Health Social Services	£19,217
Net Expenditure on Health Social Services	£18,370

PHYSICAL FEATURES AND GENERAL CHARACTER OF THE AREA.

Blackburn in situated principally in the valley of the Blakewater, and to a much smaller extent in the valley of the Darwen.

The rivers join on the western boundary of the Borough. On the north side of the Blakewater the land rises rapidly from a height of 300 feet to a height of 700 feet. To the South and West of the Darwen there is also a fairly rapid increase, from a height of 300, to 600 feet. The land between the two rivers has at first only a slight inclination, but towards the south-east it rises rapidly to a height of 650 feet. Gradients of 1 in 10 or 1 in 12 are not uncommon on the north side, and in one locality a gradient of 1 in 6 is met with. On the South side the steepest slope (Brandy House Brow) has an average rise of 1 in 10, with a short stretch of 1 in 6½.

The fall of the valley of the Blakewater is 1 in 138, or 86 feet in 2¼ miles. With a few exceptions the falls in the town may be considered good.

Geological. The deep strata underlying the town are principally the lower Coal Measures or Gannister Beds. There is a narrow strip of Alluvium in the valley of the Darwen, and Millstone Grit (rock and shale) comes to the surface on the northern side of the borough over a considerable area, and to a very small extent on the southern side.

A fault in the Millstone and Gannister Beds, with a downthrow of some 45 yards, is manifest near the railway line running to Ribchester and practically parallel with it. Two smaller faults in the Gannister are seen running east and west on the south side in the region of Black-a-Moor and north and south in the region of Guide. Uncertain outcrops of coal occur at the foot of the northern slopes and at the top of the southern elevation.

The Gannister beds underlie nearly the whole of the town proper, and those parts which have Millstone Grit for their deep strata are principally agricultural land. With one or two exceptions the deep strata are covered with drift beds. Throughout the greater part of the borough the drift beds are principally composed of clay. There is, however, an area of land in the centre of the town, in the region of the Town Hall, Market Place, and Railway Station, covered with a fair depth of pure sand. Northwards it extends as far as Regent Street and Richmond Terrace, and westwards, as a narrow strip as far as Witton Stocks. The sand varies considerably in its purity. In the neighbourhood of Church Street, Mincing Lane, Weir Street, Clayton Street and King Street it is of a reddish colour and reaches a maximum depth of some 20 feet. In the vicinity of Galligreaves Street and Whalley Banks the sand was overlaid by a thin covering of clay, most of which has been removed by building operations. To the south of Bank Top, and Redlam, the subsoil is a mixture of sand, gravel and clay, whilst to the north of Bank Top and Redlam, as far as the river Blakewater, the subsoil is mostly sand. Over the remainder of the town the drift beds are clay, or clay and gravel.

Millstone Grit reaches the surface along Revidge Road, chiefly on the south side, and from this outcrop originate numerous springs.

From the aspect of Health, the drift beds are of the most importance. Upon their character the dryness of a locality depends. The extent of the clay drifts has some bearing upon the prevalence of the rheumatic afflictions which are a prominent feature in the sickness records of the town.

METEOROLOGY.

January was wet and fairly mild, except for a week of cold weather commencing about the 13th. Snow fell during this period. Sunshine was deficient, and this month showed the lowest aggregate hours of sunshine.

Dull and mild weather prevailed during February. The mean daily duration of sunshine was below the average, and high winds occurred frequently.

March was, on the whole, fair and mild. The month opened with high westerly winds and sleet, whilst ground frosts occurred during the second and third weeks. Sunshine was deficient.

April was mild, dull and wet. There were occasional thunderstorms with hail. Ground frosts occurred in the second week. Sunshine was again below the normal.

May opened with heavy rain and throughout the month the weather was changeable and cool. Thunderstorms and hail showers were frequent and the total rainfall was in excess of normal. There was a deficiency of sunshine.

June was dull and wet during the early part and rather cooler than normal. Occasional ground frosts occurred. During the second half of the month finer conditions prevailed and the sunshine aggregate was a little above normal for the month.

July was on the whole fair and warm, but with undue prevalence of high winds. Thunderstorms occurred with heavy rain. A period of high temperatures was maintained from the 10th to the 14th. There was a slight excess of rainfall, but sunshine was slightly above normal in amount. This was the warmest month of the year.

August was warm with occasional thunderstorms. The total rainfall was rather below average and sunshine about the average. This month showed the greatest aggregate hours of sunshine.

September was also warm and moderately dry until the end of the month, which was windy and showery. Sunshine was slightly in excess of the normal.

October opened with warm, dry weather, but later became colder and wetter, with hail and sleet showers and considerable frequency of winds. Severe frosts were experienced.

November was a very wet month and warmer than usual. Sunshine was deficient, being considerably below the average. This was the wettest month of the year.

December, on the other hand, was a dry month. Showers of sleet and hail were experienced in the middle of the month. The temperature was about the average for the month, and sunshine slightly above the average.

In 1926 Blackburn had the highest total rainfall of any large town in England, *viz.*, nearly 41 inches, as measured at the Corporation Hospital.

METEOROLOGY.

Climatological Station, Corporation Hospital,

560 feet above sea level.

	1926	1925
Highest reading of maximum thermometer ...	86·0 July 14	86·0 June 6
Lowest reading of minimum thermometer ...	23·5 Dec. 15	23·0 Nov. 1 and Dec. 30
Total Rainfall	40·905	38·199 ins.
No. of Days on which Rain fell	251	223
No. of Days without any Bright Sunshine ...	93	80

Direction of Prevailing Wind :—

	N.	*N.E.*	*E.*	*S.E.*	*S.*	*S.W.*	*W.*	*N.W.*	*Calm.*
1926—Days ...	8	18	104	25	51	27	104	28	—
1925—Days ...	23	15	71	17	69	17	131	21	1

Third Quarter.

	1926	1925
Mean Atmospheric Temperature at 9 a.m. ...	44·62	59·70
Mean Temperature 1 ft. below the ground ...	46·25	57·13
Mean Temperature 4 ft. below the ground ...	49·43	54·62
Total amount of Bright Sunshine in Hours ...	237	527
Amount of Rain	15·980	5·561 in.

Keen 12/1

TABLE 1.

METEOROLOGY, 1926. **Corporation Hospital Station, Height 560 feet.**

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Amount of Bright Sunshine..	hrs. min. 17 30	hrs. min. 27 35	hrs. min. 68 5	hrs. min. 97 20	hrs. min. 151 5	hrs. min. 161 55	hrs. min. 122 5	hrs. min. 181 20	hrs. min. 95 40	hrs. min. 73 20	hrs. min. 44 40	hrs. min. 23 55	hrs. min. 1114 0
Average per day	0·33	0·59	2·11	3·7	4·52	5·11	3·56	5·51	3·11	2·22	1·29	0·46	..
Maximum amount in one day.	hrs. min. 3 45	hrs. min. 3 50	hrs. min. 8 5	hrs. min. 11 20	hrs. min. 12 15	hrs. min. 13 15	hrs. min. 13 30	hrs. min. 13 5	hrs. min. 10 35	hrs. min. 7 55	hrs. min. 7 0	hrs. min. 3 45	..
Total Rainfall (in inches)....	4·29	3·90	1·485	1·795	3·99	2·98	2·550	3·925	4·835	3·350	6·280	1·515	40·905
No. of days on which rain fell.	25	24	16	16	21	16	18	21	23	20	26	25	251
Av. Temp. at 9 a.m. (Fahr.)..	39·09	41·69	41·38	46·11	47·93	55·20	61·20	57·56	54·80	44·00	40·18	39·50	—
Temp. of earth at depth of 1ft.	38·65	41·07	41·61	45·76	47·65	55·36	61·10	60·20	57·30	48·09	41·43	38·61	—
Temp. of earth at depth of 4ft.	40·07	41·28	42·80	44·95	47·62	50·56	55·40	56·90	56·38	53·07	46·11	42·19	—
Highest Temp. in Shade	50·50	54·00	54·50	68·00	70·50	72·00	86·00	81·00	78·00	68·50	52·00	46·50	—
Lowest Temp. in Shade	24·50	29·00	29·00	29·50	31·00	40·00	41·00	60·00	37·00	24·00	25·00	23·50	—
Av. Temp. Sun (black bulb)..	38·09	50·50	68·80	92·13	106·90	115·56	116·29	124·90	107·56	91·80	57·60	46·61	—
Lowest Temp. on Grass	22·00	26·00	23·00	24·50	27·00	36·00	41·00	40·00	29·50	19·50	21·00	20·00	—
Highest cor. reading of barom.	30·399	30·450	30·440	30·179	30·075	30·345	30·336	30·465	30·334	30·445	30·146	30·758	—
Lowest cor. reading of barom.	29·295	29·198	29·326	29·254	29·717	29·188	29·428	29·608	29·511	29·098	28·668	29·644	—
Mean reading of barometer.. (uncorrected)	29·178	29·201	29·456	29·586	29·456	29·329	29·466	29·428	29·478	29·387	28·991	29·670	—

SOCIAL CONDITIONS.

Blackburn is essentially an industrial town, the chief industry being Cotton Weaving and its subsidiary branches.

Details from the 1921 Census were given in my last report. From these figures it would appear that, normally, 748 women in every 1,000 were textile workers, and 280 males in every 1,000.

The year has been one of depressed industrial conditions, with much unemployment.

POOR LAW RELIEF.

BLACKBURN UNION.

I am indebted to Mr. G. B. Pye, the Clerk to the Guardians, for the following information :—

No. of Residents of Blackburn Township in receipt of Out-door poor relief on the

1st January, 1926	1504	families, comprising	3440	persons.
1st July, 1926	1400	,, ,,	2941	,,
1st January, 1927	1653	,, ,,	2675	,,

No. of Blackburn persons relieved in the Guardians' Institution on the 1st January, 1927	894
and in the Cottage Homes on the same date	85

Expenditure on Out-Relief to Blackburn cases during the twelve months ended 30th September, 1926 :—

Half-year ended 31st March, 1926	£21,380	8s.	1d.
Half-year ended 30th Sept., 1926	£24,212	6s.	6d.

No. of Blackburn Township cases in the Queen's Park Hospital at the end of 1926 : 332. (This number is included in the 894 mentioned above).

HOSPITAL ACCOMMODATION PROVIDED OR SUBSIDISED BY THE LOCAL AUTHORITY.

I.—*Tuberculosis.*

A ward of 34 beds is set apart at the Corporation Hospital for the treatment of frank cases of Pulmonary Tuberculosis. A ward of 20 beds is also used as a Residential Open-Air School for malnourished and pre-tubercular children.

Nine beds are reserved for Early Cases sent by the Corporation, at Meathop Sanatorium, Grange-over-Sands.

II.—*Maternity.*

The Springfield Maternity Home, Preston New Road, has accommodation for 20 cases. In addition to the isolation ward of 2 beds, there are two wards of 5 beds each, one ward of 4 beds, one ward of 2 beds and one private ward, which usually contains only one bed, but is large enough for two if the need arises.

A fully-qualified matron is in charge, and is supported by a staff of five nurses, all of whom are certified midwives. Patients may be attended by their private doctor if they wish, otherwise they are attended by the trained midwives in the Home. The lady Assistant Medical Officer attends to advise and to give treatment in the case of patients who have not engaged a doctor.

A scale of fees is in operation according to the amount of income per head per week. The Committee have given the Medical Officer of Health power to remit the minimum fee (1½ guineas per week) in cases of proved necessity. There is, consequently, no reason why any mother, whose home surroundings do not lend themselves to the satisfactory carrying out of a confinement, should not avail herself of the facilities and comforts of the Home.

III.—*Children.*

The Local Authority do not maintain a children's hospital. Provision is made for pre-Tubercular cases, at the Corporation Hospital. From April, 1925, an agreement has been entered into with the Board of Guardians, in relation to the residential treatment of Crippled and delicate children. The arrangement places this portion of Queen's Park Hospital under the category of Special Schools.

IV.—*Fever and Small Pox.*

The Corporation Hospital at Longshaw Lane has accommodation for 64 Fever patients in addition to the two wards mentioned under previous headings; making a total of 120 beds. In time of severe epidemic prevalence of infectious disease, accommodation can be made for 36 additional Fever beds, bringing the total Fever bed accommodation to 100. This would not entail disturbance of the Tuberculous patients.

The Finnington Small Pox Hospital has accommodation for 60 beds.

OTHER HOSPITAL ACCOMMODATION.

Blackburn and East Lancashire Royal Infirmary.

I am indebted to the General Superintendent and Secretary for this information:—Male beds, 60; Female beds, 66; Children, 26; Total, 152.

The normal bed capacity is 152, but owing to heavy demands made upon the resources of the Institution, beds are placed in the middle of wards, and the daily average number of beds occupied is 170.

Queen's Park Hospital (*Guardians*).

I am indebted to Mr. G. B. Pye, Clerk to the Guardians, for the following information :—

On the 1st January last the total number of beds at the Guardians' Institution was 1,424, and the total number of inmates was 1,261. The total number of such inmates who were suffering from sickness, accident or bodily or mental infirmity, including aged and infirm persons requiring regular nursing, care or treatment, was 1,059.

The total number of sick children on 1st January, 1926, was...	141
Admitted during the year 1926	384
Discharged or died	403
Number remaining on 1st January, 1927	122

Ambulance Facilities.

(*a*) *For Infectious Cases.*

The Local Authority have two motor ambulances. They are garaged at the Corporation Hospital.

(*b*) *For Non-Infectious Cases.*

The Watch Committee have provided an ambulance garaged at the Fire Station. The Joint Committee of the British Red Cross Society and the St. John Ambulance Brigade also have an ambulance. It is kept at the Fire Station. It is used mostly for out of the Borough cases, but it is available when required for cases within the Borough

VITAL STATISTICS.

Marriages. The number of marriages solemnised was 985, compared with 1,089 in 1925, 1,069 in 1924, 1,064 in 1923, and 1,084 in 1922. The marriage-rate was 15·8 per 1,000 of the population. 519 were solemnised in Established Churches, 343 in other places of worship, and 123 in the Register Office.

Births. The births registered were 1,667 legitimate, and 76 illegitimate. The birth-rate consequently was 14·0. For England and Wales the rate was 17·8, and in the 105 Great Towns—of which Blackburn is one—it was 18·2.

1667
76

The illegitimate births in Blackburn were 4·3% of the total, compared with 3·6% in 1925, 4·6% in 1924, 4·4% in 1923, and 4·5% in 1922.

The total male births numbered 875, the female 868, being a proportion of 1,008 males to 1,000 females.

The months with the highest birth-rate were August (15·8) and June (14·6). Those with the lowest were November (12·2), and January (12·4).

The months with the highest Infantile Mortality were December (190), and March (123); those with the lowest were August (35), September (45) and October (51).

The subjoined Table (Table 4) gives the Vital Statistics for the Wards in the town. It is seen therefrom that the Wards with the highest Birth Rates were: St. Mary's (17·3), St. Paul's (16·1), and St. Peter's and St. Luke's (both 15·9). Those with the lowest rates were: St. Silas's (8·4)—a very low birth rate—St. Thomas's (11·1), and St. Michael's (11·5).

Deaths. The deaths numbered 1,616, compared with 1,767 last year; 1,810 in 1924; 1,736 in 1923; 1,843 in 1922. For 1926 the death-rate was 12·9. The death-rate for England and Wales was 11·6, and for the 105 Great Towns 11·6. The male death-rate was 14·0; the female, 12·1.

The months with the highest death-rates were: March (16·5), November (15·6), and February (15·2). Those with the lowest were: July (9·2), August (10·3), and October (10·5).

Wards with the highest death-rates were: St. Mary's (22·6), St. Peter's (15·8), and St. Paul's (14·1). Those with the lowest were: St. Michael's (9·7), St. Mark's (10·8), and St. Silas's (11·1).

Natural Increase. The excess of births over deaths was 127, or 1·02 per 1,000 of the population. A comparison with previous years is given below.

The natural increase of population, disregarding immigration and emigration, was largest in St. Mark's (+30), Trinity (+26), and St. Matthew's (+25). A decrease of population occurred in St. Mary's (—29), St. Silas's (—25), and St. Thomas's (—14).

TABLE 2.

Year.	*Birth Rate.*	*Death Rate.*	*Natural Increase* 1,000 *Population.*
1894	29·5	17·7	11·8
1904	23·5	17·2	6·3
1914	20·8	14·9	5·9
1920	22·1	13·9	8·2
1921	19·5	12·7	6·8
1922	16·8	14·2	2·6
1923	16·2	13·4	2·8
1924	15·3	14·0	1·3
1925	14·9	13·9	1·0
1926	14·0	12·9	1·1

A reference to Table 5 shows that the Wards with the greatest overcrowding, as evidenced by the number of persons per acre (1921 Census) were St. Matthew's (87·1), St. Paul's (79·5), and St. John's (71·1). Those with the least overcrowding were St. Thomas's (7·0), St. Silas's (9·1), and St. Stephen's (9·5).

The following summary is interesting in the light it throws upon the relationships between Birth Rates, Death Rates, overcrowding and social conditions.

TABLE 3.

Highest Birth Rate.	*Highest Death Rate.*	*Highest Infant Mortality Rate.*	*Greatest Population per Acre.*	*Least Room space per person*
St. Mary's	St. Mary's	St. Mary's	St. Matthew's	St. Mary's
St. Paul's	St. Peter's	St. Stephen's	St. Paul's	St. Luke's
St. Peter's St. Luke's	St. Paul's	St. Matthew's	St. John's	St. Matthew's St. Peter's Trinity

TABLE 3—*Continued.*

Lowest Birth Rate.	*Lowest Death Rate.*	*Lowest Infant Mortality Rate.*	*Least Population per Acre.*	*Most Room space per person*
St. Silas'	St. Michael's	St. Thomas'	St. Thomas'	St. Silas'
St. Thomas'	St. Mark's	Trinity	St. Silas'	St. Thomas'
St. Michael's	St. Silas'	St. John's	St. Stephen's	St. John's St. Mark's

The Death Rates for the past six years in the various Wards show fluctuations, but certain Wards have a general high level and others a low level. Taking the average death-rates for the six years, the following Wards were the least favourable :—St. Mary's (19·4)—this Ward has the unenviable distinction of repeatedly heading the list—St. Peter's (16·0), and St. Paul's (14·9). Those with the lowest average were : St. Mark's (11·4), St. Silas's (11·5), and St. Michael's (12·1).

TABLE 4.

VITAL STATISTICS DURING 1926.

Wards	Population	Births	Deaths	Birth-Rate	Death-Rate	Deaths under one year per 1000 Births	Death-rate from six Zymotic Diseases excluding Diarrhœa	Death-rate from Diarrhœa	Death-rate from Bronchitis & Pneumonia	Death-rate from Pulmonary Tuberculosis	Death-rate from Non Pulmonary Tuberculosis
St. Stephen's	10823	153	135	14·1	12·4	130	0·2	0·3	2·5	0·7	0·1
Trinity	8708	129	103	14·8	11·8	62	0·2	0·0	2·5	0·9	0·0
St. Michael's	8820	102	86	11·5	9·7	78	0·1	0·1	1·3	0·4	0·1
St. John's...	7066	105	88	14·8	12·4	66	0·1	0·0	1·7	1·1	0·1
St. Silas's...	8857	74	99	8·4	11·1	67	0·2	0·0	1·2	0·6	0·0
St. Paul's...	9591	155	136	16·1	14·1	83	0·3	0·1	2·8	1·0	0·0
St. Peter's	6593	105	104	15·9	15·8	104	0·3	0·0	4·5	1·2	0·0
St. Mary's	5424	94	123	17·3	22·6	158	1·6	0·1	4·9	1·1	0·1
St. Matthew's...	9156	141	116	15·4	12·1	106	0·0	0·2	2·6	1·2	0·3
St. Thomas's	11855	132	146	11·1	12·3	53	0·2	0·2	1·9	0·6	0·0
Park	9318	134	127	14·3	13·6	75	0·3	0·3	2·5	0·8	0·0
St. Luke's	7439	119	101	15·9	13·6	92	0·5	0·0	2·5	1·3	0·4
St. Mark's	10238	141	111	13·7	10·8	99	0·0	0·1	2·1	0·4	0·0
St. Andrew's	10512	159	141	15·1	13·4	75	0·3	0·0	2·1	0·7	0·0
Borough	124400	1743	1616	14·0	12·9	89	0·2	0·1	2·4	0·8	0·07

TABLE 5.

WARD DEATH RATES IN RELATION TO PERSONS PER ACRE AND ROOM SPACE.

1921 CENSUS.

Ward.	*Death Rate.*	*Persons per Acre.*	*Rooms per Persons.*
St. Stephen's	12·4	9·5	1·08
Trinity	11·8	59·1	1·05
St. Michael's	9·7	14·4	1·10
St. John's	12·4	71·1	1·13
St. Silas'	11·1	9·1	1·50
St. Paul's	14·1	79·5	1·12
St. Peter's	15·8	50·5	1·05
St. Mary's	22·6	31·8	1·02
St. Matthew's	12·1	87·1	1·05
St. Thomas's	12·3	7·0	1·28
Park	13·6	14·6	1·08
St. Luke's	13·6	45·1	1·03
St. Mark's	10·8	25·9	1·13
St. Andrew's	13·4	11·6	1·07

TABLE 6.

DEATH RATES IN WARDS FOR THE PAST SIX YEARS.

Ward.	1921	1922	1923	1924	1925	1926	*Av. of 6 Years*
St. Stephen's ..	12·4	12·4	12·9	14·8	12·1	12·4	12·8
Trinity	12·2	13·8	16·5	14·8	14·2	11·8	13·9
St. Michael's	12·3	11·3	14·6	12·9	11·9	9·7	12·1
St. John's	11·6	12·0	10·7	14·3	13·0	12·4	12·3
St. Silas's	10·7	11·8	11·7	12·5	11·4	11·1	11·5
St. Paul's	13·9	16·1	14·7	15·9	15·2	14·1	14·9
St. Peter's	14·0	16·7	13·1	17·6	19·0	15·8	16·0
St. Mary's	15·3	20·5	18·3	18·4	21·5	22·6	19·4
St. Matthew's ..	12·8	12·8	11·6	15·6	13·1	12·1	13·0
St. Thomas's ..	13·4	12·9	11·8	11·3	13·6	12·3	12·5
Park	11·0	17·7	13·1	14·6	13·8	13·6	13·9
St. Luke's	13·0	15·6	12·9	11·9	14·7	13·6	13·6
St. Mark's	12·8	12·8	11·2	9·3	11·6	10·8	11·4
St. Andrew's	13·4	15·6	16·1	14·8	14·3	13·4	14·6
Borough	12·7	14·2	13·4	14·0	13·9	12·9	13·5

TABLE 7.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1926 AND PREVIOUS YEARS.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number	Nett.				of Non-residents registered in the District.	of Residents not registered in the District.	Under 1 Year of Age.		At all Ages.	
			Number	Rate	Number	Rate			Number	Rate per 1,000 Nett Births.	Number	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1916	121066	2067	2065	15·6	1875	15·4	154	58	250	121·0	1779	14·6
1917	113315	1627	1626	12·8	1829	16·1	148	86	180	110·7	1767	15·5
1918	111447	1551	1552	12·4	2265	20·3	178	88	194	125·0	2175	19·5
1919	125992	1835	1838	14·0	2106	16·7	161	63	174	94·6	2008	15·9
1920	127700	2835	2827	22·1	1891	14·8	157	52	311	110·0	1786	13·9
1921	129400	2538	2528	19·5	1753	13·5	157	59	276	109·1	1655	12·7
1922	129376	2207	2177	16·8	1983	15·3	190	50	215	98·7	1843	14·2
1923	129000	2121	2094	16·2	1878	14·5	191	49	210	100·2	1736	13·4
1924	129000	2013	1980	15·3	2013	15·4	250	47	167	84·3	1810	14·0
1925	126900	1948	1902	14·9	1973	15·5	251	45	186	97·7	1767	13·9
1926	**124400**	**1802**	**1743**	**14·0**	**1795**	**14·4**	**240**	**61**	**156**	**89·5**	**1616**	**12·9**

TABLE 8.

DEATHS REGISTERED DURING THE CALENDAR YEAR 1926 CLASSIFIED BY AGE AND CAUSE.

Causes of Death.	Nett Deaths at the subjoined ages of "Residents," whether occuring within or without the District.											Total Deaths whether of "Residents" or "non-Residents" in Institutions in the District.
	All Ages	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 35 years.	35 and under 45 years.	45 and under 55 years.	55 and under 65 years.	65 years and upwards.	
1	2	3	4	5	6	7	8	9	10	11	12	13
All Causes Certified	1610	156	38	41	53	79	65	112	171	269	626	660
All Causes Uncertified	6	..	..	..	..	..	..	..	..	3	3	—
Enteric Fever	2	..	..	..	1	..	..	..	..	..	1	1
Small Pox	..	..	..	..	..	..	..	..	..	..	..	—
Measles	3	1	1	..	..	..	1	—	—	—	—	1
Scarlet Fever	1	..	..	1	..	..	..	..	..	..	..	2
Whooping Cough	20	6	8	6	..	..	..	..	..	..	..	3
Diphtheria and Croup	8	1	1	1	5	..	..	..	..	..	..	9
Influenza	23	..	..	1	1	2	1	4	1	4	9	1
Erysipelas	1	..	..	..	..	..	..	..	..	1	..	2
Tetanus	..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis	106	1	..	1	5	38	17	21	13	9	1	40
Tuberculous Meningitis	2	1	1	..	..	..	..	..	..	..	..	1
Other Tuberculous Diseases	8	1	1	..	2	..	2	1	1	..	..	7
Cancer, Malignant Disease	166	..	..	..	..	2	1	15	31	53	64	54
Acute Rheumatism and Rheumatic Fever	..	..	..	..	..	..	..	..	..	..	..	..
Cerebro-Spinal Meningitis	..	..	..	..	..	..	..	..	..	..	..	..
Encephalitis Lethargica	11	..	..	1	2	1	2	3	2	..	..	11
Other Forms of Meningitis (not T.B.)	9	4	..	2	2	..	1	..	..	..	..	4
Poliomyelitis	..	..	..	..	..	..	..	..	..	..	..	..
Locomotor Ataxy	..	..	..	..	..	..	..	..	..	..	..	..
General Paralysis of the Insane	3	..	..	..	..	..	..	..	2	1	..	..
Cerebral Hæmorrhage	69	..	..	..	..	..	..	3	2	17	47	23
Other Diseases of the Nervous Sys'm	57	4	1	..	2	4	..	2	7	13	24	32
Senile Decay	86	..	..	..	..	..	..	..	..	..	86	64
Organic Heart Disease	198	1	..	1	1	2	4	12	27	48	102	49
Arterio-Sclerosis	65	..	..	..	..	..	..	1	1	10	53	12
Aneurism	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of the Circulatory System	31	..	1	..	..	3	2	2	5	3	15	3
Bronchitis, Acute	133	17	3	4	3	1	4	9	6	21	67	33
Bronchitis, Chronic	59	..	..	1	..	4	1	..	7	6	40	9
Influenzal Broncho Pneumonia	3	..	..	..	..	1	..	1	..	..	1	1
Pneumonia (other forms)	109	23	15	12	5	..	3	9	8	13	21	23
Other Diseases of the Respiratory System	20	3	1	..	..	1	..	2	4	4	5	4
Diarrhœa and Enteritis	15	9	..	2	1	..	..	..	..	2	1	6
Appendicitis, Typhlitis and Peritonitis	13	..	..	..	1	3	2	2	2	2	1	27
Cirrhosis of the Liver	2	..	..	..	..	1	..	..	..	..	1	..
Alcoholism	1	..	..	..	..	..	..	..	1	..	..	—
Other Diseases of the Digestive Sy'm	46	5	1	..	2	..	4	6	6	10	12	41
Nephritis and Bright's Disease	59	1	..	1	..	4	2	..	10	13	28	14
Other Diseases of the Urinary Sys'm	9	..	..	..	..	..	..	..	1	6	2	15
Puerperal Fever	7	..	..	..	..	2	1	4	..	..	..	4
Puerperal Pyrexia	..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases and Accidents of Pregnancy and Parturition	7	..	..	..	..	2	3	2	..	..	..	8
Congenital Debility and Malforma'n	35	35	..	..	..	..	..	..	..	..	..	15
Premature Birth	41	41	..	..	..	..	..	..	..	..	..	10
Venereal Diseases	2	..	..	..	..	..	..	..	2	..	..	2
Other Diseases of the Reproductive System (Non-Malignant)	7	1	..	..	..	..	1	1	..	1	3	12
Violent Deaths (excluding Suicide)	52	..	2	6	11	1	6	2	4	8	12	48
Suicide	16	..	..	..	..	2	2	2	5	2	3	2
All other Defined Diseases	108	3	2	1	9	5	5	8	23	24	28	67
Diseases Ill-defined or unknown	3	..	..	..	..	..	..	..	..	1	2	—
All Causes	1616	156	38	41	53	79	65	112	171	272	629	660

TABLE 9.

CLASSIFICATION OF DEATHS ACCORDING TO DISEASE.

CAUSE OF DEATH.	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	
	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Death Rate.
Enteric Fever	2	1	4	1	..	..	..	1	..	1	2	0·01
Smallpox	..	..	..	..	..	..	..	..	..	..	..	0·00
Measles	14	21	39	..	18	3	32	6	20	28	3	0·02
Scarlet Fever..............	4	2	2	2	3	1	2	..	1	3	1	0·008
Whooping Cough	7	11	26	11	1	20	9	7	7	16	20	0·16
Diphtheria and Croup	9	8	11	3	10	6	7	1	3	8	8	0·06
Influenza	25	14	338	187	59	20	72	49	69	34	23	0·18
Erysipelas	2	2	1	1	..	2	1	2	1	..	1	0·008
Phthisis (Pulmonary Tuberculosis)	115	119	126	116	82	77	96	93	85	90	106	0·85
Tuberculous Meningitis	7	13	17	10	14	5	10	4	4	9	2	0·01
Other Tuberculous Diseases..	22	23	20	17	15	19	16	27	22	11	8	0·06
Cancer, Malignant Disease ..	136	152	131	165	172	175	163	177	184	160	166	1·33
Rheumatic Fever	10	2	2	2	..	2	..	..	..	2	..	0·00
Meningitis	23	14	21	5	17	13	15	10	11	18	9	0·07
Organic Heart Disease......	257	274	214	269	215	214	221	166	204	211	198	1·59
Bronchitis	220	190	189	269	231	163	224	209	238	194	192	1·54
Pneumonia (all forms)......	162	155	266	210	178	133	173	189	199	176	112	0·90
Other Diseases of Respiratory Organs	30	26	27	16	16	19	29	22	21	15	20	0·16
Diarrhœa and Enteritis	29	36	27	26	45	47	26	24	15	12	15	0·12
Appendicitis and Typhlitis..	7	16	7	9	12	11	8	9	4	10	13	0·10
Cirrhosis of Liver	7	4	6	3	3	11	5	10	5	5	2	0·01
Alcoholism	4	..	..	..	3	1	..	..	..	..	1	0·008
Nephritis & Bright's Disease.	44	46	65	51	52	56	39	53	51	44	59	0·47
Puerperal Fever	4	1	2	5	3	6	1	5	3	4	7	0·05
Other Accidents and Diseases of Pregnancy and Parturition	4	9	9	6	13	5	14	9	7	7	7	0·05
Congenital Debility and Malformation, including Premature Birth..........	110	70	73	84	130	104	98	100	59	68	76	0·61
Violent Deaths, excluding Suicide	47	60	52	40	48	46	43	36	49	46	52	0·41
Suicide	25	12	10	8	12	17	20	22	21	20	16	0·12
Other Defined Diseases	419	451	442	428	407	470	511	500	526	567	494	3·97
Diseases ill-defined or unknown	34	35	48	64	27	9	8	5	2	8	3	0·02
TOTAL................	1779	1767	2175	2008	1786	1655	1843	1736	1810	1767	1616	12·99

POPULATION.

Explanation of Graphs.

The estimated population is shown from 1841 in yearly periods by a continuous black line. The letter " C " denotes a Census Year. The dotted line joins together the decennial census figures. From 1841 until 1914 the estimated populations in the intercensal years approximated very closely with the censal graph During the war years there was a dislocation. The population in the years 1920—1924 (inclusive) was estimated too high. In spite of the fact that 1921 was a census year, the figures derived from that census were held to be inaccurate. That it was not so was proved by the census taken in March, 1926. The consequences of this error are that the Birth Rate and the Death Rates are both estimated too low.

Growth of Population. The period of most rapid growth was between 1871 and 1881. This is so even if the populations of the added areas be deducted. From 1881 there is shown a fairly rapid decline in the rate of growth until between 1891 and 1911 the curve becomes flattened. The population of Blackburn reached its zenith in 1914. From 1914 to 1918 there was a rapid decline in the population due to the war and its consequences ; 1919 showed a jump of over 14,000, and 1920 a further increase of a little over 3,000. This is explained by the return of troops from the war. Since 1920 there has been no increase, but a slow decline. It seems as if the plateau had been reached, and the level of this plateau—which showed signs of forming in 1914—is some 7,000 lower than it would have been if the war had not supervened.

Population growth seems to obey definite rules. As Professor Raymond Pearl, in his book " The Biology of Population Growth " points out, " Growth occurs in cycles. Within one and the same cycle, and in a spatially limited area, growth in the first half of the cycle starts slowly, but the absolute increment per unit of time increases steadily until the mid-point of the cycle is reached. After that point the increment per unit of time becomes steadily smaller until the end of the cycle." In the Blackburn curve the commencement of the cycle was before 1841, the mid-point appears to be somewhere about 1881, from which date the increment per unit of time has become steadily smaller. The absolute asymptote for Blackburn has, apparently been attained, and the population cannot be expected to increase to any extent in the future unless the actual and potential resources of the town are in some way or other augmented.

Birth Rate per 1,000 *living.* This is shown by a continuous red graph. Since 1876 the general tendency has been downwards. The fall was rapid between 1876 and 1880, followed by a remission from 1880 to 1891. From this latter date the fall has been steady, with only occasional slight remissions. If the abnormal war years and the three years following the war are ignored, and the birth curve is continued direct from 1914 to 1922, the trend of the curve is similar to that between 1883 and 1914.

Death Rate per 1,000 *Population.* There has been a steady diminution of the death-rate *pari passu* with the birth-rate, but not to so great an extent. The natural increase of population, *i.e.*, of births over deaths, was between 1871 and 1891, since when it has diminished. During the abnormal war years deaths exceeded the births. Since 1921 the births and deaths have year by year nearly balanced.

An interesting feature of this graph is the flattening out of the wide fluctuations in the death-rates which occurred from 1841 to 1871. The most usual causes of such fluctuations are epidemic diseases, and the diminishing frequency and lesser amplitude of these jumps in the last 25 years is a favourable commentary upon modern public health measures. The influenza epidemic of 1918 and 1919 produced the greatest rise in the past quarter of a century, but even this catastrophe was less than the rises in the earlier part of the period under observation.

The study of population growth is an important one, and has occupied the attention of thinking men throughout the ages. From time to time opinions on the advisability of rapid growth or of slow growth have fluctuated, this fluctuation usually being influenced by prevailing conditions of war or peace. The tendency, borne out by Pearl's experiments, is for populations to increase up to the limit of subsistence. It is decidedly better to increase the income—the earning capacity—of a population than to concentrate on increasing the population alone. A population with the comfort derived from a good income is preferable to that in which a population exceeds its income and is ever in urgent need of the means of subsistence. Although the work of Malthus is often misquoted and misunderstood, his reasoning has more than a stratum of truth ; the growth of population, if left unchecked by artificial means, would continue until starvation arrested it. Unfortunately the application of artificial methods of restriction tend in practice to restrict one section of the population at the expense of the other. The thoughtless expand at the expense of the thoughtful.

The growth in numbers of a population depends on (*a*) The excess of births over deaths ; (*b*) Migration. In Blackburn migration does not play an important role, as is shown in the close approximation of estimates of population to census figures. The natural increase of population, *i.e.*, excess of births over deaths, since 1914, has been very small. Comparing the fall in the

Birth Rate, with the corresponding falls in the Infantile Mortality rate, the former has, unfortunately, fallen more rapidly, and through a greater range, than the latter. High birth-rates are usually associated with high infantile mortality rates ; but an unusually low birth-rate, associated with a moderately high infantile mortality rate, is a disquieting phenomenon which requires all possible efforts to correct. The present measures for the prevention of infant mortality must be pursued with vigour, and expanded whenever the opportunity arises.

CAUSES OF DEATH AND SICKNESS.

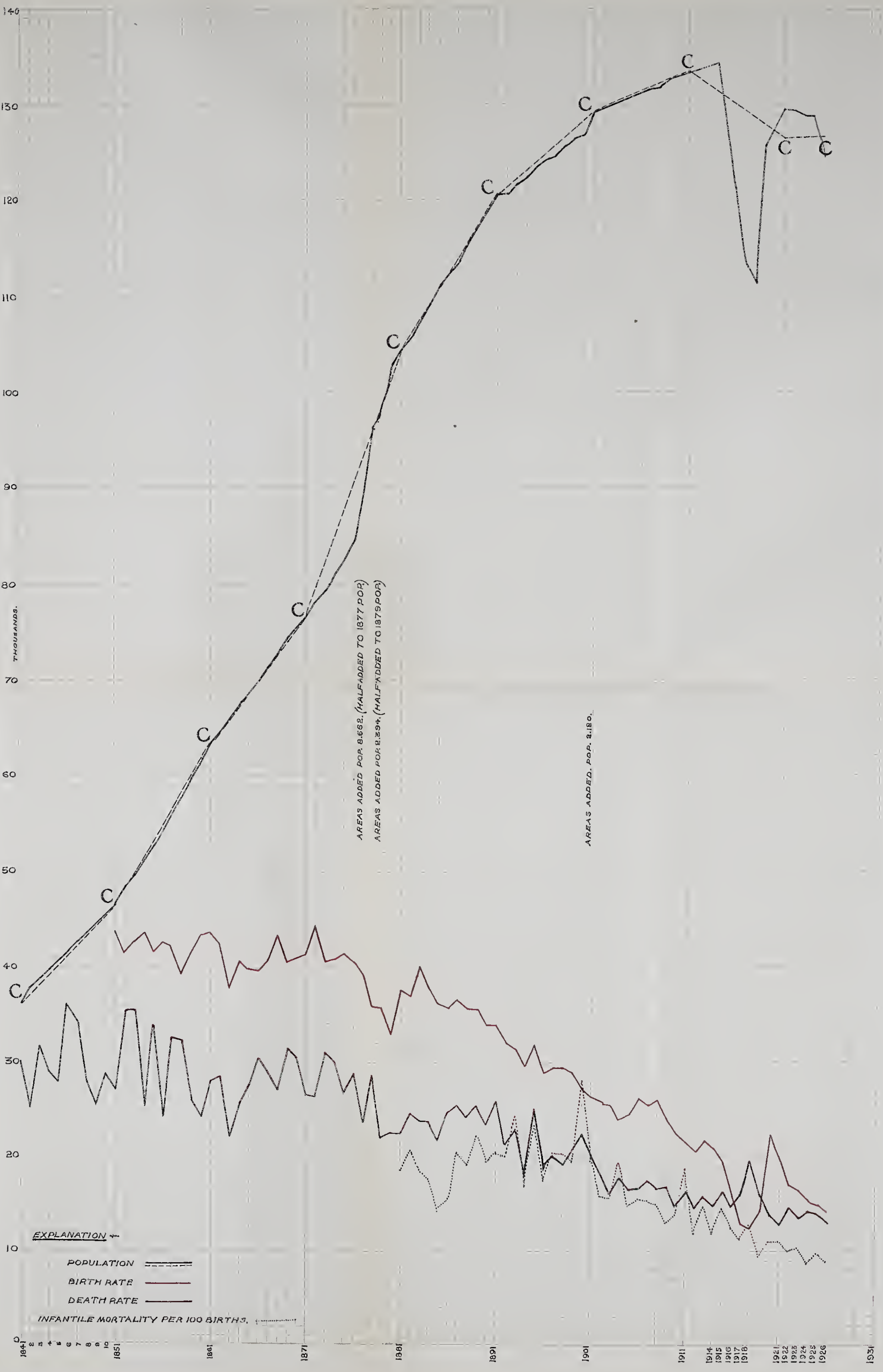
The chief causes of Death during 1926 were Organic Heart Disease (198 deaths, death-rate 1·59) ; Bronchitis (192 deaths, death-rate 1·54) ; Cancer (166 deaths, death-rate 1·33) ; Pneumonia (112 deaths, death-rate 0·90) ; and Pulmonary Tuberculosis (106 deaths, death-rate 0·85).

Taking diseases of bodily systems and Group Diseases to which death was definitely assigned, we find :—

	Deaths.	*Death-rate.*
Respiratory System (Non-Tubercular)	324	2·60
Circulatory System (Non-Tubercular)	294	2·36
Renal System (Non-Tubercular)	68	0·54
Nervous System (Non-Tubercular)	149	1·19
Cancer	166	1·33
Tuberculosis (all forms)	116	0·93
Infectious Diseases	58	0·46
Diseases of Babyhood (under 1 year)	76	0·61
Diseases of Maternity	14	0·11
Digestive Diseases	77	0·61

The Respiratory group of diseases bulks most largely in the Death Returns of the town. Including Pulmonary Tuberculosis, the deaths from diseases of the lungs numbered 430, making a death-rate of 3·45 per 1,000 living. These complaints are predisposed to by the impurities in the air breathed, the bodily resistance being lessened meantime by various deleterious factors. The conclusions to be drawn are obvious. Unfavourable climatic conditions, coupled with a dirty atmosphere, are probably the predominant causes for this high death-rate. Blackburn is not peculiar in this respect, as the Vital Statistics for the whole country show, year by year, a high respiratory death-rate in the industrial towns of the North, as compared with agricultural areas throughout England and Wales.

In 1925 deaths from Diseases of the Respiratory System numbered 385, with a death-rate of 3·01. Pneumonia, in particular, showed a decline in


THOUSANDS.
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
C
AREAS ADDED POP. 8.662. (HALF ADDED TO 1877 POP.)
AREAS ADDED POP. 2.394. (HALF ADDED TO 1879 POP.)
AREAS ADDED. POP. 2.180.
EXPLANATION
POPULATION
BIRTH RATE
DEATH RATE
INFANTILE MORTALITY PER 100 BIRTHS.
1841
2
3
4
5
6
7
8
9
10
1851
1861
1871
1881
1891
1901
1911
1914
1915
1916
1917
1918
1921
1922
1923
1924
1925
1926
1931

1926. There seems to be some connection between the cleaner atmosphere occasioned by the coal dispute and the decline in this group of diseases. The months of July, August, September and October showed a lower average death-rate than normal, although weather conditions were not particularly favourable over this period.

It is superfluous to point out the remarkable clarity of the air over Blackburn during the months of May, June, July and August. It was self-evident, and emphasised most surely the influence which domestic and industrial smoke exerts on the air of the town.

Organic Heart Disease was the greatest single cause of death ; 198 deaths were caused in 1926 as compared with 211 in 1925, 204 in 1924, 166 in 1923, 221 in 1922, 214 in 1921, and 215 in 1920. The rate is seen to remain at a fairly steady figure. Other diseases of the Circulatory system caused 96 deaths. Arterio-Sclerosis—a thickening of and loss of elasticity in the walls of the arteries—caused 65 of these deaths.

It is safe to surmise that a considerable number of the cases of Organic Heart Disease were primarily due to Acute Rheumatism, although no deaths were registered as due to this latter cause in 1926. The foundation for Organic Heart Disease is commonly laid in childhood or young adult life. In some, little disturbance is manifested until the more advanced years are reached. In others, an emergency call may be made upon the heart owing to a concurrent acute ailment, and it is found wanting. The death is certified as due to the acute illness, but if the heart had been sound recovery might have supervened. I have dealt with the so-called " growing pains " in my School Report.

Acute Rheumatism. Several important reports have been published during the year bearing on this subject. The British Medical Association issued a report on Rheumatic Heart Disease in children. The main findings of this investigation are : (1) The disease is essentially one of children of the artisan class living in damp rooms in industrial towns, attending elementary schools, and suffering from tonsillar sepsis. (2) Great poverty, destitution and dirt do not seem to have a specific causal effect. Contrary to the opinion expressed in another report, this investigation states (3) that direct infection from one case to another is of no practical importance. Further on, in another section, the observation is made that sore throats, arthritis and heart disease are greatly diminished by tonsilectomy (removal of the tonsils), but St. Vitus' Dance is not controlled by this operation. The report calls attention to the need for " Rapid expansion of the accommodation available for prolonged institutional care of rheumatic children."

Another report issued by the Medical Research Council on "Social Conditions and Acute Rheumatism" states that it is a disease which only rarely affects children of the well-to-do, its incidence being chiefly on poorer children. These investigators apparently found evidences of family incidence, but no evidences of heredity. In rheumatic families the maternal care was thought to be less good than in other cases, but there was no evidence that dirty home conditions predisposed to the illness. Damp houses were only slightly more frequent in the cases of rheumatic families; overcrowding and bad sanitation exerted no appreciable effect. One point of interest was that "Children living under the better general hygiene afforded by institutional care are much less frequently attacked by rheumatism than children of the same class living under ordinary home conditions." A high standard of food, clothing, housing and general care emerges as the best prophylaxis against rheumatism in children. An unhealthy throat—as in the British Medical Association's Report—was noted in a higher proportion of rheumatic children than in non-rheumatic.

A third Report on the "Incidence of Rheumatic Diseases" was published in 1924, by the Ministry of Health. This Report dealt with insured persons. It was found that in every 1.000 insured males of all ages there were approximately one case of rheumatic fever and three cases of subacute rheumatism, six cases of muscular rheumatism, 10 cases of lumbago, and three cases of sciatica during a year. In females there were approximately two cases of rheumatic fever, three cases of subacute rheumatism, seven cases of muscular rheumatism, three of lumbago, and one of sciatica. Rheumatic diseases caused one-sixth of the total sick absence due to all diseases in male workers, and one-seventh in female workers. It was estimated that over £1,800,000 was paid to and 3,141,000 weeks' work lost by insured workers on account of rheumatic diseases. Of patients with acute rheumatism nearly 50% had unhealthy tonsils, and only 2% had had their tonsils removed. In acute rheumatism nearly 50%, and in subacute rheumatism 25% of the patients showed signs of heart disease. This is arresting in view of the heavy death-rate from organic heart disease in Blackburn. There were found to be considerable geographical and occupational variations in the incidence of rheumatic disease. The high average humidity of the atmosphere and in "humid" weaving sheds must exert some effect on the rather high incidence of rheumatic diseases in Blackburn.

Arterio-Sclerosis is a diseased condition of the arteries. and it is the underlying cause of most of the deaths from Cerebral Hæmorrhage (69). Alcohol, Syphilis, and a consistently strenuous life, coupled with unwise dietetical habits are the forerunners of this condition. "A man is as old as his arteries" is a wise aphorism. With pliant, elastic arteries a man may be young at 70; with hardened, non-elastic arteries he may be very old at 40 years.

Renal diseases caused 68 deaths, and diseases of the Nervous System 149 deaths, excluding deaths from Cerebral Hæmorrhage and Senile Decay. Out of a total of 1616 deaths, 86, or 5·3%, were certified as having died in the manner Nature intended, *viz.*: old age.

The Infectious Diseases accounted for 69 deaths, and of these Influenza came first with 23 deaths—11 less than in 1925, then Whooping Cough with 20 deaths, or 13 more than in 1925. Encephalitis Lethargica came next with 11 deaths. These were not all acute cases; in 40% the disease had occurred from two to three years previously, and death supervened from secondary nervous changes. Measles was prevalent throughout the town during the last two months of the year. Fortunately there was no epidemic incidence of Influenza. Diphtheria showed no exacerbation.

Deaths from prematurity and the wasting diseases of babyhood rose from 68 to 76. (*See pages* 137 *to* 142). Deaths from Violence were 52, as compared with 46 in 1925. There were 16 Suicides, as compared with 20 in 1925.

MORTALITY STATISTICS IN COTTON OPERATIVES.

The subjoined Tables are a continuation, in an abbreviated form, of Tables given in the reports of my predecessor, Dr. Greenwood, in particular, his reports for 1906 and 1912.

Comparison with the earlier figures show that there is a considerable fall in the total number of cotton operatives. This is largely the effect of the Great War. The Tuberculosis death-rates show very little change, but the death-rates from Respiratory Diseases, other than Tuberculosis, show an increase. Deaths due to respiratory diseases are markedly greater in cotton operatives than in the general population at all age periods. Spinners, and the group of unclassified operatives show throughout the most unfavourable figures. Winders and warpers are the most favourably placed. Female weavers are, apparently, less liable to illness than male weavers; there are, however, nearly three times as many female as male weavers, and therefore figures in relation to them are less liable to be upset by chance variations.

TABLE 10.

RESPIRATORY DISEASES (NON-TUBERCULAR).

DEATH-RATES PER 1,000 EMPLOYEES (1921 CENSUS).

DEATHS. DEATH RATES.

Age Period.	Weavers.		Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotto Operatives.	Borough.	Weavers.		Spinners.	Winders, Warpers, etc	Card Room Hands.	Other Cotto Operatives.	Borough.
	M.	F.						M.	F.					
Years														
15—25..	..	1	1	3	..	..	7	..	0·1	1·4	1·8	..	..	0·3
25—35..	..	1	3	1	..	1	8	..	0·2	6·1	0·9	..	1·1	0·3
35—45..	..	1	..	..	..	..	21	..	0·3	..	..	..	..	1·0
45—55..	1	2	1	..	1	1	25	1·0	1·1	4·4	...	6·1	2·4	1·5
55—65..	2	3	2	3	1	1	44	3·0	4·4	17·1	11·6	11·6	4·6	4·1
65 and upwards..	9	2	3	1	..	6	134	44·7	16·1	103·4	15·3	..	111·1	19·5
TOTAL	12	10	10	8	2	9	239	1·9	0·5	5·1	1·8	1·4	2·5	2·4

PULMONARY TUBERCULOSIS.

Age Period.	Weavers M.	Weavers F.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotto Operatives.	Borough.	Weavers M.	Weavers F.	Spinners.	Winders, Warpers, etc	Card Room Hands.	Other Cotto Operatives.	Borough.
15—25..	3	12	2	2	1	4	38	1·4	1·7	2·7	1·2	1·8	2·9	1·7
25—35..	2	6	1	3	..	..	17	1·5	1·2	2·0	2·7	..	..	0·8
35—45..	1	1	..	..	..	..	21	0·8	0·3	..	..	..	..	1·0
45—55..	2	1	..	..	..	..	13	2·0	0·6	..	..	..	..	0·8
55—65..	..	..	..	1	..	..	9	..	..	..	3·8	..	..	0·8
65 and upwards..	..	..	..	..	..	..	1	..	..	..	..	..	..	0 1
TOTAL	8	20	3	6	1	4	99	1·2	1·1	1·5	1·3	0·7	1·1	1·0

TABLE 10—*Continued.*

NON-PULMONARY TUBERCULOSIS.

Age Period.	DEATHS. Weavers. M.	F.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.	DEATH RATES. Weavers. M.	F.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.
Years														
15—25..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
25—35..	1	..	..	1	..	..	2	0·8	..	..	0·9	..	..	0·09
35—45..	..	..	..	..	..	1	1	..	..	..	..	..	1·4	0·05
45—55..	..	..	..	..	..	1	1	..	..	..	..	..	2·4	0·06
55—65..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
65 and upwards..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL	1	..	..	1	..	2	4	0·1	..	..	0·2	..	0·5	0·04

ALL OTHER DISEASES.

Age Period.	DEATHS. Weavers. M.	F.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.	DEATH RATES. Weavers. M.	F.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.
15—25..	1	7	2	2	..	2	34	0·5	0·9	2·7	1·2	..	1·5	1·5
25—35..	1	6	1	1	1	1	38	0·8	1·2	2·0	0·9	2·8	1·1	1·8
35—45..	6	9	1	1	1	3	69	5·2	2·6	2·7	1·2	3·7	4·4	3·4
45—55..	9	13	..	6	..	5	132	9·0	7·6	..	11·9	..	12·1	8·2
55—65..	11	9	7	1	1	12	219	16·6	13·3	60·0	3·8	11·6	55·8	20·5
65 and upwards..	27	14	12	7	..	23	496	134·3	112·1	413·7	107·7	..	425·9	71·9
TOTAL	55	58	23	18	3	46	986	8·7	3·2	11·7	4·1	2·1	12·8	10·2
GRAND TOTAL...	76	88	36	33	6	61	1328	12·0	4·9	18·4	7·5	4·2	17·0	13·7

TABLE 11.

POPULATIONS, 1921 CENSUS.

Age Period.	Weavers.		Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.
	M.	F.					
Years							
15—25	2019	7009	723	1616	530	1329	21946
25—35	1258	4892	490	1094	359	899	20876
35—45	1151	3380	367	819	269	674	19878
45—55	1000	1707	224	501	164	412	16052
55—65	660	676	117	261	86	215	10647
65 and upwards	201	124	29	65	21	54	6866
TOTAL	6289	17788	1950	4356	1429	3583	96265

CANCER.

The deaths from Cancer numbered 166, as compared with 160 in 1925; 184 in 1924; 177 in 1923; 163 in 1922; 175 in 1921; and 172 in 1920. There has been, therefore, no apparent definite increase in the deaths during the past five years.

The Death Rates per 1,000 of the population for the past 11 years are as follows:—

1916	1·12	1922	1·26
1917	1·34	1923	1·37
1918	1·17	1924	1·42
1919	1·30	1925	1·26
1920	1·22	1926	1·33
1921	1·36		

TABLE 12.

DEATHS FROM CANCER IN MUNICIPAL WARDS.

					POPULATION CENSUS, 1921.	
Ward.	*Male*	*Female*	*Total*	*Death Rate.*	*Male.*	*Female.*
St. Stephen's	4	8	12	1·08	5062	5959
Trinity..	8	4	12	1·35	4054	4810
St. Michael's	4	4	8	0·89	4091	4884
St. John's	4	6	10	1·39	3266	3920
St. Silas's	3	8	11	1·22	3842	5167
St. Paul's	6	9	15	1·53	4392	5379
St. Peter's..	4	7	11	1·63	3250	3469
St. Mary's	4	5	9	1·63	2616	2909
St. Matthew's	6	4	10	1·07	4260	5061
St. Thomas's	6	9	15	1·24	5553	6515
Park	5	6	11	1·16	4227	5252
St. Luke's	7	4	11	1·45	3471	4101
St. Mark's	5	9	14	1·34	4682	5745
St. Andrew's	8	9	17	1·58	4881	5825
TOTAL	74	92	166	1·33	57647	68996

TABLE 13.

DEATHS FROM CANCER OCCURRED AT THE FOLLOWING AGES :

Age Period.	*Male.*	*Female*	*Total*	*No. of population at this age period.*	*Incidence per 1,000 persons living.*
18—25 years	1	1	2	41052	0·04
25 and under 35 years	..	1	1	30975	0·03
35 ,, 45 years	7	8	15	19530	0·76
45 ,, 65 years	43	41	84	26124	3·21
65 years and over	23	41	64	6719	9·52
	74	92	166	124400	1·33

TABLE 14.

SITES OF FATAL CANCER.

Site.	*Male.*	*Female.*	*Total.*
Skin	3	2	5
Tongue	4	..	4
Oesophagus	5	3	8
Stomach	15	19	34
Liver	5	5	10
Bowel	8	15	23
Rectum	9	6	15
Bladder	2	2	4
Prostate	3	—	3
Larynx	1	—	1
Uterus	—	19	19
Breast	—	13	13
Ovary	—	3	3
Pancreas	2	2	4
Spleen	2	—	2
Pharynx	4	—	4
Cerebral	1	1	2
Bones	4	—	4
Lung	1	—	1
Male Genital Organs ..	5	—	5
*Glands..	—	2	2
TOTAL	74	92	166

*Probably secondary to Cancer elsewhere.

TABLE 15.

Occupations of Persons Dying from Cancer.

DEATH RATE PER 1000 EMPLOYEES.

Occupation	Male	Female	Population Census 1921		Death Rate from Cancer per 1000 employees		Death Rate from Cancer per 1000 employees (1925)	
			Male	Female	Male	Female	Male	Female
Cardroom Hands	—	1	136	948	—	1·05	—	3·16
Housewives	—	74	—	23317	—	3·17	—	2·48
Cotton Weavers	11	12	6289	17788	1·74	0·67	2·09	0·62
Carters	7	—	767	10	9·12	—	3·91	—
Labourers	7	—	2984	29	2·35	—	8·04	—
Bricklayers	1	—	166	—	6·02	—	No deaths in 1925.	
Joiners	3	—	532	—	5·63	—		
Insurance Agents	1	—	180	3	5·55	—	5·42	—
Winders and Warpers	—	1	64	4108	—	0·24	—	1·70
Overlookers	3	—	188	4	15·95	—	15·95	—
Shopkeepers	6	2	1230	861	4·87	2·32	5·69	3·48
Licensed Victuallers	1	—	247	127	4·04	—	4·04	—
Clerks	1	—	1596	624	0·62	—	1·88	—
Reedmaker	1	—	178	36	5·61	—	No deaths in 1925.	
Cotton Tape Sizers	1	—	331	9	3·02	—		
Domestic Servant	—	1	35	1142	—	0·87		
Cotton Drawers and Twisters	5	—	564	75	8·86	—	3·54	—
Boilermakers	1	—	90	—	11·11	—	—	—
Tailors	1	—	307	346	3·25	—	3·25	—
Engine Fitters	2	—	753	1	2·65	—	3·98	—
Platelayers	1	—	46	—	21·73	—	21·73	—
Gardeners	1	—	171	1	5·84	—	5·84	—
Canal Boatmen	1	—	64	5	15·62	—	No deaths in 1925.	
Musician	1	—	40	15	25·00	—		
Charwomen	—	1	9	333	—	3·00		
Chimney Sweep	1	—	10	—	100·00	—		
Motor Drivers	1	—	694	—	1·44	—		
Cotton Spinners	5	—	809	1101	6·18	—	3·48	—
Other Cotton Operatives	1	—	1606	440	0·62	—	1·24	—
Marine Store Dealers	1	—	4	22	250·00	—	No deaths in 1925.	
Farrier	1	—	65	—	15·38	—		
Engine Tenter	1	—	251	—	3·98	—		
Engine Driver (Rly.)	1	—	242	—	4·13	—		
Goods Guard (Rly.)	1	—	56	—	17·85	—		
Foundry Labourers	2	—	414	—	4·83	—		
Colliery Workers	1	—	280	—	3·57	—		
Minister of Religion	1	—	27	—	37·03	—		
No Occupation	1	—	2850	—	0·35	—		
TOTAL	74	92	24275	51345	3·04	1·79	3·94	1·71

Deaths from Cancer occurred in members of the following occupations in 1925, but not in 1926, *viz.* : Stonemasons (1) ; Shoemakers (1) ; Painters (1) ; Cotton Mill Managers (1) ; Dressmakers (1 F.) ; Brass Finishers (1) ; Postmen (1) ; Machinists (1 F.) ; Plasterers (1) ; Heald Knitters (1, F.) ; Wood Carvers (1).

Deductions based upon a comparatively small population such as Blackburn are of little value in themselves; but consideration of larger statistics seems to bring out some defined characteristics in the incidence of Cancer. These are :—

Firstly : Organs liable to exposure to persistent irritation of any character are peculiarly apt to develop Cancer. Cancer of the bowel is commoner in women than in men. Bowel habits may be concerned with this.

Secondly : Organs which at one period or other of their life undergo extensive involutary changes seem liable to develop cancerous degeneration, during involution, *e.g.*, the female breast, the uterus.

Thirdly : There appears to be a tendency for Cancer to develop at an earlier age than formerly. Brownlee believes that the frequency of Cancer is an indication of senescence, and it affords an interesting commentary upon the tendency of Cancer to supervene at an earlier age than in former generations. Does this mean that, under modern conditions of life, the period of youth is shorter and old age earlier in onset ?

The theories regarding the origin of Cancer are many and in their very multiplicity is revealed the ignorance surrounding this subject. Various substances, edible and otherwise, have been indicted, but anything like conclusive scientific proof is wanting. When the secrets of cell life and cell growth have been laid bare, Cancer will be conquered, for Cancer is an uncontrolled growth of cells. Primary Cancer cells are of the same kind as those which go to form the organ it attacks. Something has caused this riotous misbehaviour, and that "something" is the cause of Cancer. Research has not, as yet, revealed any methods by which this scourge can be prevented. Whatever the cause, Cancer kills an unnecessarily large number of persons because, the general public have not yet realised the enormous importance of the time factor. Cancer may, in a number of instances, be eradicated successfully, if operative measures are taken in time.

Cancer of the skin is particularly prevalent in chimney sweeps, and is also high in certain processes associated with Cotton manufacture, especially those engaged in mule-spinning. Whether this particular form of cancer is due to splashing with oil from the rotating spindle pins, or whether it is due to friction set up between the trousers and the skin—more especially if coloured overalls are worn—is a question which is still keenly debated. The facts seem to point rather to the latter cause as being the primary factor. It is frequent also in Textile dyers and manufacturing chemists.

Again, Cancer of the lip is most frequent in agricultural labourers, seamen and dock labourers; occupations in which opportunities for excessive smoking are abundant. It is interesting to note that coal miners working below ground where smoking is forbidden, contrast very favourably with colliery workers employed on the surface, where smoking is not prohibited.

Cancer of the tongue is prevalent amongst brewers, costermongers and hawkers, tobacconists, butchers, and printers. A recent Government report states that "The list of occupations with unusually low incidence of cancer of the tongue does not include any group with a high death-rate from alcoholic diseases."

Taking the two sexes together, the stomach is the most frequent site of Cancer. Although the Blackburn figures are small, they illustrate this point. The report referred to above states: "A well-marked excess in the incidence of cancer of the stomach is found in certain occupations connected with the manufacture of cotton and wool." In cotton-weavers the incidence of gastric cancer is quite definitely in excess of the average for workers in all occupations.

It cannot be repeated too often or too forcibly that as soon as danger signals manifest themselves, that is the time for submission to thorough medical examination, and surgical treatment, if necessary. Many lives would be saved each year if the victims of this scourge would take this advice to heart and act upon it.

In women the incidence of Cancer of the Breast is affected by sexual activity. It is more prevalent in unmarried than in married women, and among the married it is least common in the most fertile. Normal lactation is a preventative of Cancer of the Breast.

Cancer of the Breast is a very fatal disease, but this high fatality—apart from certain anatomical reasons—is explained when it is calculated that only 15% of the total cases present themselves for treatment whilst the disease is in the eradicable stage.

TABLE 16.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1926.

Notifiable Disease.	Cases notified in whole District.								Total cases notified in each Locality.														Total cases removed to Corporation Hospital	Total Deaths in the Borough
	At all Ages	At Ages—Years.																						
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards	St. Stephen's	Trinity	St. Michael's	St. John's	St. Silas'	St. Paul's	St. Peter's	St. Mary's	St. Matthew's	St. Thomas'	Park	St. Luke's	St. Mark's	St. Andrew's		
Small-pox...	9	–	–	1	–	1	3	4	–	–	–	–	–	–	–	1	–	8	–	–	–	–	9	–
Cholera	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Diphtheria (including Membranous Croup) ...	81	2	21	48	2	7	1	–	4	7	2	4	9	6	–	8	7	5	4	3	6	16	73	8
Erysipelas...	44	1	–	3	5	9	19	8	3	2	5	3	1	2	3	2	3	4	7	1	5	3	1	1
Scarlet Fever	218	–	59	144	15	–	–	–	10	10	13	16	25	11	3	11	17	26	19	3	16	38	166	1
Typhus Fever	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Enteric Fever	9	–	1	3	1	3	–	1	–	–	–	–	3	1	–	2	–	1	–	–	–	2	8	2
Puerperal Fever	11	–	–	–	3	8	–	–	1	1	–	1	–	1	1	1	1	2	1	–	1	–	2	6
Puerperal Pyrexia	11	–	–	–	4	7	–	–	2	1	–	–	1	1	2	1	–	–	1	1	–	1	2	–
Cerebro-spinal Meningitis ...	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ophthalmia Neonatorum ...	19	19	–	–	–	–	–	–	1	1	4	2	1	–	1	–	1	2	4	–	1	1	1	–
Pulmonary Tuberculosis M	69	–	–	8	22	27	11	1	5	7	6	6	2	4	4	6	8	6	5	–	4	6	44	54
Pulmonary Tuberculosis F	63	–	1	5	22	28	7	–	3	4	10	1	3	4	2	2	6	6	7	4	4	7	35	52
Other forms of Tuberculosis M	21	1	3	11	4	1	1	–	1	4	1	–	–	2	–	2	3	1	3	1	–	3	–	8
Other forms of Tuberculosis F	23	–	–	14	4	3	2	–	–	4	3	1	–	2	3	2	2	2	2	–	2	–	–	2
Poliomyelitis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Encephalitis Lethargica ...	9	–	1	2	1	4	1	–	–	3	–	1	1	1	1	–	–	1	–	–	–	1	3	11
Dysentery...	1	–	–	–	–	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1	–
Malaria	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–
Pneumonia	149	12	26	25	13	35	25	13	7	8	9	5	3	10	13	14	17	6	15	10	15	17	–	26
*Diarrhœa	12	8	4	–	–	–	–	–	–	–	–	–	–	–	1	1	2	3	3	1	–	1	–	9
TOTALS	750	43	116	264	96	134	70	27	37	52	54	40	49	45	34	54	67	73	71	24	54	96	345	180

* Notifiable from July 1st to October 31st only.

TABLE 17.

INFECTIOUS DISEASES. AGE INCIDENCE OF CASES NOTIFIED.

	Under One Year		1—2 Years		3—4 Years		5—10 Years		11—15 Years		16—20 Years		21—35 Years		36—45 Years		46—65 Years		Over 65 Years		Total		Totals 1920		Totals 1921		Totals 1922		Totals 1923		Totals 1924		Totals 1925	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Scarlet Fever	..	..	1	1	26	31	48	54	15	27	1	9	1	4	..	..	..	..	..	..	92	126	79	102	94	117	123	108	87	129	37	33	133	171
Diphtheria	2	..	1	1	14	5	16	20	4	8	..	1	1	6	..	1	..	1	..	..	38	43	30	39	23	22	23	29	16	19	21	41	31	36
Erysipelas..............	1	..	..	..	..	..	1	..	..	2	..	..	5	2	1	5	4	15	3	5	15	29	22	37	19	28	22	32	27	25	19	26	14	25
Enteric Fever	..	..	..	..	..	1	1	..	..	2	..	1	2	..	..	1	..	..	..	1	3	6	1	4	1	1	4	1	2	1	2	1	1	1
Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..	1	..	5	..	5	..	..	..	..	..	11	..	12	..	15	..	7	..	12	..	10	..	13
Puerperal Pyrexia	..	..	..	..	..	..	..	..	..	..	..	..	..	9	..	2	..	..	..	..	..	11	..	..	..	..	..	..	..	..	..	..	..	..
Ophthalmia Neonatorum	10	9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	9	8	14	10	14	10	12	6	9	9	8	12	13
Pneumonia Ac. Primary..	5	7	5	6	7	8	10	5	4	6	9	4	8	8	13	6	16	9	6	7	83	66	99	59	111	65	157	118	196	153	205	153	153	89
Tuberculosis—Lungs	..	..	..	..	..	1	5	3	3	2	14	4	23	38	12	8	11	7	1	..	69	63	48	40	90	60	86	59	100	76	77	73	80	87
do. Other Forms.	1	..	1	..	2	..	7	8	4	6	3	..	1	6	1	1	1	2	..	..	21	23	23	15	37	34	42	28	40	62	31	32	32	34
Encephalitis Lethargica..	..	..	..	..	..	1	1	..	..	1	..	..	1	..	3	1	..	1	..	..	5	4	..	2	2	..	1	..	6	4	16	16	4	1
Diarrhœa	5	3	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	6	..	..	12	19	..	1	1	1	2	2	11	10
TOTALS	24	19	9	11	49	47	89	90	30	54	27	20	42	78	30	30	32	35	10	13	342	397	310	324	399	375	468	395	481	491	419	395	471	480

TABLE 18.

Infectious Diseases.

Case Incidence per 1000 of the population.

	St. Stephen's	Trinity:	St. Michael's	St. John's	St. Silas	St. Paul's	St. Peter's	St. Mary's	St. Matthew's	St. Thomas	Park	St. Luke's	St. Mark's	St. Andrew's
Scarlet Fever	0·92	1·14	1·47	2·26	2·82	1·14	0·45	2·03	1·85	2·19	2·03	0·40	1·56	3·61
Diphtheria	0·37	0·80	0·22	0·56	1·01	0·62	0·00	1·47	0·76	0·42	0·42	0·40	0·58	1·52
Erysipelas..................	0·28	0·22	0·56	0·42	0·11	0·20	0·45	0·36	0·32	0·33	0·75	0·13	0·48	0·28
Enteric Fever	..	..	..	..	0·33	0·10	..	0·37	..	0·08	..	..	..	0·19
Puerperal Fever	0·09	0·11	..	0·14	..	0·10	0·15	0·18	0·10	0·17	0·10	..	0·09	..
Puerperal Pyrexia	0·18	0·11	..	..	0·11	0·10	0·30	0·18	..	..	0·10	0·13	..	0·09
Ophthalmia Neonatorum	0·09	0·11	0·45	0·28	0·11	..	0·15	..	0·10	0·17	0·42	..	0·09	0·09
Acute Primary Pneumonia ..	0·64	0·91	1·02	0·70	0·33	1·04	1·97	2·58	1·85	0·50	1·60	1·34	1·46	1·61
Tuberculosis—Lungs	0·73	1·26	1·81	0·99	0·56	0·83	0·91	1·47	1·52	1·01	1·28	0·53	0·78	1·23
do. Other Forms ..	0·09	0·91	0·45	0·14	..	0·41	0·45	0·73	0·54	0·25	0·53	0·13	1·95	0·28
Encephalitis Lethargica......	..	0·34	..	0·14	0·11	0·10	0·15	..	..	0·08	..	..	..	0·09
Diarrhœa	..	..	..	..	..	..	0·15	0·18	0·21	0·25	0·32	0·13	..	0·09

TABLE 19.

SHEWING NUMBER OF CASES OF INFECTIOUS DISEASES NOTIFIED FROM 1907 TO 1926.

DISEASE.	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
Smallpox	1	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
Diphtheria (including Membranous Croup)	150	100	102	96	107	55	76	62	39	52	50	57	30	69	45	52	35	62	67	81
Erysipelas	99	81	94	90	77	87	90	97	69	66	40	52	38	59	47	54	52	45	39	44
Scarlet Fever	544	595	1013	795	343	116	268	704	460	153	96	150	136	181	211	231	216	70	304	218
Enteric Fever	61	85	69	46	49	26	31	31	44	14	13	13	3	5	2	5	3	3	2	9
Puerperal Fever	25	11	11	10	9	9	8	10	5	5	3	5	5	12	15	7	12	10	13	11
Peurperal Pyrexia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis ...	...	...	...	...	...	1	...	...	...	2	...	1	2	...	...	...	...	...	...	...
Poliomyelitis	...	...	...	...	...	4	1	...	...	1	...	...	...	1	3	...	1	1	...	...
Pulmonary Tuberculosis ...	...	...	...	...	...	217	230	212	213	154	131	176	124	88	150	145	176	150	169	132
Other forms of Tuberculosis ...	...	...	...	...	...	...	104	60	88	49	47	54	47	38	71	70	102	63	71	44
Ophthalmia Neonatorum ...	...	...	...	...	...	...	...	15	19	15	7	15	18	22	24	22	15	17	25	19
*Measles	...	...	...	...	...	...	...	...	...	1081	1938	1560	103	...	...	...	...	...	...	...
Encephalitis Lethargica ...	...	...	...	...	...	...	...	...	...	...	...	...	5	2	2	1	10	32	5	9
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	3	1	1	...	...	...	...	1
Malaria	...	...	...	...	...	...	...	...	...	...	...	...	61	18	4	2	1	1	1	1
Pneumonia	...	...	...	...	...	...	...	...	...	...	...	...	114	158	176	275	349	358	242	149
†Diarrhœa...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	31	1	2	4	21	12
TOTALS	880	872	1291	1038	585	515	808	1191	937	1592	2325	2083	689	654	782	865	974	816	959	750

* No longer notifiable.

† Notifiable from July 1st to October 31st only.

TABLE 20.

NOTIFICATION OF INFECTIOUS DISEASES.

Disease	Total cases notified	Cases admitted to Hospital	Total Deaths	Incidence Rate per 1000 of Population					Death Rate per 1000 of Population					Housing Conditions														
				1926	1925	1924	1923	1922	1926	1925	1924	1923	1922	1926			1925			1924			1923			1922		
														1—3 rooms	4—5 rooms	over 5 rooms	1—3 rooms	4—5 rooms	over 5 rooms	1—3 rooms	4—5 rooms	over 5 rooms	1—3 rooms	4—5 rooms	over 5 rooms	1—3 rooms	4—5 rooms	over 5 rooms
Small Pox	9	9	..	0·07	0·00	0·00	0·00	0·00	0·00	0·00	0·00	0·00	0·00	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	218	166	1	1·75	2·41	0·54	1·67	1·79	0·008	0·02	0·007	0·00	0·01	14	147	57	16	100	88	1	46	23	2	151	62	13	151	67
Diphtheria	81	73	8	0·65	0·52	0·48	0·28	0·40	0·06	0·06	0·01	0·007	0·05	2	51	28	2	39	26	..	36	26	..	25	10	4	32	16
Enteric Fever	9	8	2	0·07	0·01	0·02	0·02	0·04	0·01	0·007	0·00	0·007	0·00	..	4	5	..	..	2	..	1	2	..	3	..	..	3	2
Puerperal Fever	11	2	7	0·08	0·10	0·07	0·09	0·05	0·05	0·03	0·02	0·03	0·007	..	10	1	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Pyrexia	11	2	..	0·08	..	..	..	..	0·00	..	..	..	..	..	7	4	..	..	..	..	..	..	..	..	..	..	..	..
Pneumonia																												
Acute Primary and Acute Influenzal	149	..	26	1·19	1·90	2·77	2·70	2·13	0·20	0·37	0·69	0·56	0·44	3	106	40	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	44	1	1	0·35	0·30	0·34	0·40	0·41	0·008	0·00	0·007	0·01	0·007	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ophthalmia Neonatorum	19	1	..	0·15	0·19	0·11	0·11	0·14	0·00	0·00	0·007	0·00	0·00	..	14	5	..	..	..	..	..	..	..	..	..	..	..	..
Encephalitis Lethargica	9	3	11	0·07	0·03	0·24	0·07	0·007	0·08	0·03	0·06	0·02	0·00	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis—Pulmonary																												
Males	69	44	54	0·55	0·64	0·59	0·77	0·66	0·43	0·38	0·41	0·42	0·38	6	50	13	5	51	26	6	46	25	10	62	38	3	41	22
Females	63	35	52	0·50	0·68	0·56	0·58	0·45	0·42	0·32	0·25	0·29	0·35	8	47	8	6	56	25	2	56	18	1	45	30	4	30	24
Total	132	79	106	1·06	1·33	1·16	1·36	1·11	0·85	0·70	0·66	0·72	0·74	14	97	21	11	107	51	8	102	43	11	107	68	7	71	46
Non-Pulmonary:																												
Males	21	..	8	0·16	0·29	0·24	0·31	0·32	0·06	0·08	0·07	0·12	0·09	..	19	2	1	25	11	1	22	8	..	28	1	1	28	13
Females	23	..	2	0·18	0·26	0·24	0·48	0·22	0·01	0·07	0·13	0·11	0·10	1	21	1	..	24	10	1	23	8	1	45	16	..	23	5
Total	44	..	10	0·35	0·55	0·48	0·79	0·54	0·07	0·15	0·20	0·23	0·19	1	40	3	1	49	21	2	45	16	1	73	28	1	51	18
Diarrhœa	12	..	9	0·09	0·16	0·03	0·01	0·007	0·07	0·01	0·01	0·01	0·02	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL	748	344	181	6·01	7·55	6·28	7·56	6·60	1·45	1·42	1·09	1·58	1·52	34	476	164	30	295	188	11	230	110	14	359	168	25	308	149

HOUSING IN RELATION TO NOTIFIABLE INFECTIOUS DISEASES.

According to the Census of 1921. the room accommodation of the houses in Blackburn was as follows :—

	All Buildings.	*Occupied by Private Families.*		
		1 family.	*2 families.*	*3 families.*
I.—One to Three Rooms per House	2145	2088	26	11
II.—Four to Five Rooms per House	25906	25188	388	18
III.—Five Rooms per House	3394	3129	72	28

Table 18 shows that 14 cases of Scarlet Fever occurred in Group I. ; 147 cases in Group II., and 57 cases in Group III. In past years a similar incidence is shown. There were 2,125 families in Group I., therefore the incidence rate per 100 families in this Group is 0·66. In Group II. it is 0·57, and in Group III. 1·77.

For Diphtheria the relative figures are : Group I., 0·09 ; Group II., 0·19 ; Group III., 0·79.

TABLE 21.

NOTIFICATION OF INFECTIOUS DISEASES.—ROOM SPACE IN RELATION TO INFECTIOUS DISEASES INCIDENCE.

Disease.	1926								1925								1924								1923								1922							
	Admitted to Hospital.				Remaining at Home.				Admitted to Hospital.				Remaining at Home.				Admitted to Hospital.				Remaining at Home.				Admitted to Hospital.				Remaining at Home.				Admitted to Hospital.				Remaining at Home.			
	No. of persons per room				No. of persons per room				No. of persons per room				No. of persons per room				No. of persons per room				No. of persons per room				No. of persons per room				No. of persons per room				No. of persons per room				No. of persons per room			
	Less than one	*1—2*	*More than 2*	*Total.*	*Less than one*	*1—2*	*More than two*	*Total*	*Less than one*	*1—2*	*More than two*	*Total*	*Less than one*	*1—2*	*More than two*	*Total*	*Less than one*	*1—2*	*More than two*	*Total*	*Less than one*	*1—2*	*More than two*	*Total*	*Less than one*	*1—2*	*More than two*	*Total*	*Less than one*	*1—2*	*More than two*	*Total*	*Less than one*	*1—2*	*More than two*	*Total*	*Less than one*	*1—2*	*More than two*	*Total*
Scarlet Fever	32	108	26	166	30	22	..	52	55	179	10	244	25	35	..	50	15	42	4	61	7	2	..	9	32	131	7	170	20	26	..	46	36	130	8	174	25	32	..	57
Diphtheria	22	39	12	73	1	7	..	8	10	43	..	53	2	12	..	14	21	30	..	51	6	5	..	11	7	16	..	23	7	4	..	11	4	32	2	38	4	9	1	14
Enteric Fever........	..	5	3	8	..	1	..	1	..	2	..	2	..	..	..	..	1	1	..	2	1	..	..	1	..	2	..	2	..	1	..	1	1	1	..	2	..	3	..	3
TOTAL	54	152	41	247	31	30	..	61	65	224	10	299	27	47	..	64	37	73	4	114	14	7	..	21	39	149	7	195	27	31	..	58	41	163	10	214	29	44	1	74

Examination of the above Table shows that in no instance was a case nursed at home if the house population worked out at more than two persons per room. This policy has been pursued during the past five years with only two exceptions—both in cases of Diphtheria—one in 1922 and one in 1921.

It will be conceded that the practicability of efficient isolation under conditions where there are more than two persons per room is not great ; whilst the upheaval of the household arrangements is such that refusal to allow of removal of the patient is only encountered under most exceptional circumstances. No case occurred in 1926 in which the legal powers given to Local Authorities under the Infectious Diseases Prevention, and the Infectious Diseases Notification Acts, had to be applied.

In two cases of Scarlet Fever, nursed at home, severe reprimands had to be made, owing to laxity in carrying out the precautions necessary. In all cases kept at home full type-written instructions are left with the parents, and surprise visits are paid to see that isolation is being maintained. In one of the above cases the patient—in an infectious condition—was found in the living kitchen, and in the other the patient had been left alone in the house, while the mother, who was nursing the case, took another child to the Infirmary. It is but fair to say that the medical men in attendance were unaware of these breaches of conduct.

NOTIFICATION RATES PER 1,000 OF THE POPULATION, 1926.

	Small Pox.	*Scarlet Fever.*	*Diphtheria.*	*Enteric Fever.*	*Puerperal Fever.*	*Puerperal Pyrexia.*	*Erysipelas.*
Blackburn ..	0·07	1·75	0·65	0·07	0·08	0·08	0·35
England and Wales ..	0·26	2·10	1·31	0·07	0·07	0·19	0·38

DEATH RATES PER 1,000 OF THE POPULATION, 1926.

	Small Pox.	*Scarlet Fever.*	*Diphtheria.*	*Enteric Fever.*	*Puerperal Fever.*	*Puerperal Pyrexia.*	*Erysipelas.*
Blackburn ..	0·00	0·008	0·06	0·01	0·05	0·05	0·008
England and Wales ..	0·00	0·02	0·07	0·01	—	—	—

TABLE 22.

NOTIFICATION RATES AND DEATH RATES FOR BLACKBURN PER 1,000 OF THE POPULATION FOR THE FIVE YEARS 1922—1926.

Notifiable Disease.	*Notification Rate.*					*Death Rate.*				
	1922	1923	1924	1925	1926	1922	1923	1924	1925	1926
Small Pox	Nil.	Nil.	Nil.	Nil.	0·07	Nil.	Nil.	Nil.	Nil.	Nil.
Scarlet Fever ..	1·78	1·67	0·54	2·39	1·75	0·01	0·00	0·007	0·002	0·008
Diphtheria......	0·40	0·27	0·47	0·52	0·65	0·05	0·007	0·01	0·06	0·06
Enteric Fever ..	0·04	0·02	0·02	0·01	0·07	0·00	0·007	0·00	0·007	0·01
Puerperal Fever ..	0·05	0·09	0·07	0·10	0·08	0·007	0·03	0·02	0·03	0·05
Puerper'l Pyrexia	..	..	..	..	0·08	..	..	..	..	0·05
Erysipelas	0·41	0·40	0·34	0·30	0·35	0·007	0·01	0·007	0·00	0·008

SCARLET FEVER.

The number of cases notified declined from 304 in 1925 to 218 this year. The great majority were mild, but there was apparent a decided tendency to a more severe type with complications, in the last quarter of the year. One case died, giving a case mortality of 0·46%. Although no undue pressure was exerted to get parents to consent to the removal of their children to the Corporation Hospital, 166 out of the total of 218 (76·1%) expressed their desire for this to be done. In homes where isolation would have been impossible, the facts were pointed out to the parents, and sometimes, although obdurate at first, a perusal of the recently compiled pamphlet setting forth the conditions to be fulfilled, not infrequently changed the complexion of affairs, and the parents, quite sensibly, saw that removal to Hospital meant a considerable saving of time, trouble and money.

It is undoubted that Hospital treatment has exerted and is still exerting a very favourable effect upon the mortality. In an industrial town where a large proportion of mothers go to work, the application of a universal system of home nursing of cases of Scarlet Fever, is impractical.

Table 15 shows that the brunt of the incidence fell on children from 3 to 10 years (73%). From 1 to 5 years the incidence is 27%. Five cases occurred in adults over 21 years, but no case was reported in persons over 30 years of age.

St. Andrew's Ward had the greatest incidence in relation to population (3·61), followed by St. Silas's (2·82), St. John's (2·26), St. Thomas' (2·19), St. Mary's and Park (each 2·03). The least incidence was in St. Luke's Ward (0·40). In 1925 also St. Andrew's showed a high rate of incidence.

DIPHTHERIA.

There were 81 cases notified during the year, an increase over 1925 of 14, and of these 73 were removed to the Corporation Hospital (90·1%). The incidence of the disease is much less than that for the whole of England and Wales. The number of deaths was 8, giving a case mortality of 9·9%, as compared with a case mortality from Scarlet Fever of 0·46%. In 1925 the case mortality rate was 11·9%. These mortalities give a true picture of the relative severity of the two diseases at the present time. Diphtheria is not a highly infectious disease, but it must at all times be regarded as a dangerous one. It is essentially a complaint requiring skilled nursing and early adequate treatment. If given early and in sufficient dosage, Diphtheria Antitoxin is a sure method of treatment. The pity is that cases are not seen early enough, or when seen the administration of antitoxin is delayed. Parents are not blameless in this respect, as, an ordinary sore throat is often thought to be all that ails the child, and the seeking of medical aid is put off until more serious symptoms become manifest. Any sore throat, accompanied with prostration and vomiting, should be regarded seriously in a child and considered as Diphtheria until the reverse is proved.

The heaviest incidence is from 1 to 15 years of age, *viz.*, 85·2%. One case occurred in a person over 45 years, and 7 cases in the period 25 to 35 years.

The disease was widely scattered, with a preponderance of cases in St. Andrew's Ward (16), followed by St. Silas's (9). It is noteworthy that these wards also had the largest number of Scarlet Fever cases.

The ages of the fatal cases were 2 months ; 13 months ; 4 years ; 5 years ; and 4 cases aged 6 years.

While dealing with Scarlet Fever and Diphtheria I would like to mention briefly some recent and important work carried out in this country, and particularly in the U.S.A., bearing upon preventive measures. The two tests are known respectively as the Schick Test for Diphtheria susceptibility and the Dick Test for Scarlet Fever susceptibility.

In my last report I gave a description of the Schick Test and the immunization of persons giving a Schick-positive reaction. Since that time considerable work has been carried out to test the reliability of this method, and the position is so far consolidated that I have no hesitation in recommending parents to have their children tested, and immunized, if necessary, by this method, if they have been in contact with a case of Diphtheria, or if

Diphtheria assumes epidemic proportions. The Staff of the Health Department will carry out all the necessary procedures, but only with the expressed consent of the patient's private medical man. The same remarks apply also to the Dick Test, which is a similar test for Scarlet Fever.

MEASLES.

This complaint is not notifiable under the Infectious Diseases (Notification) Act. In connection with the Maternity and Child Welfare and the School Medical Departments, however, a fairly high proportion of the total cases are brought to the knowledge of the Public Health Department. The cases notified by parents and teachers numbered 619, compared with 919 in 1925, 927 in 1924, 427 in 1923, and 1,688 in 1922.

Thirteen cases of Measles were admitted to the Isolation Hospital. There were three deaths from Measles, one in a child under one year of age ; one in a child two years of age ; and one in an adult 27 years of age.

Measles is a more fatal disease than Scarlet Fever. It is particularly prone to attack children under five years of age, and the mortality is highest at this period of life. If proper nursing is carried out it is not, in the vast majority of cases, a serious disease, but the greatest danger lies in an attitude of indifference. Measles kills by its complications and its sequelæ, and the incidence of these is largely dependent upon the amount of nursing care expended at the time of the attack. The longer a child evades an attack the less likely it is to occur ; susceptibility declines—at least in people of this country—as age advances.

WHOOPING COUGH.

This infectious disease is not notifiable. There were 261 cases of, and 20 deaths due to, Whooping Cough, a case mortality rate of 7·6%, compared with 448 cases and 16 deaths in 1925 ; 172 cases and 7 deaths in 1924. Whooping Cough has shown indications of increasing in severity in the past few years, and it is now one of the most fatal of the infectious diseases.

INFLUENZA.

This complaint was slightly more prevalent than in 1925. Twenty-three deaths were certified as due to Influenza, as compared with 34 in 1925, 69 in 1924, 49 in 1923, and 72 in 1922.

The notifications of acute primary or acute influenzal pneumonia received in 1926 were 149, being 93 fewer than in 1925; in 1924 they numbered 358. Of these cases 26 died, giving a mortality of 17·4 per 100 cases.

The following table is inserted to show, month by month, the relation between Influenzal deaths, deaths from Influenzal Pneumonia, and deaths from Bronchitis and Pneumonia.

TABLE 23.

Month.	*Deaths from Influenza.*	*Deaths from Influenzal Pneumonia.*	*Deaths from Bronchitis and Pneumonia.*
January	3	4	37
February	1	4	31
March	3	1	32
April	1	2	29
May	6	2	20
June	3	2	28
July	—	1	12
August	1	3	9
September	1	2	13
October	2	1	28
November	1	3	29
December	1	1	36
TOTAL	23	26	304

There is a singular lack of correlation between these figures, the explanation of which is not definite; discrepancies in notification and mistaken diagnoses may have a bearing on the subject. As would naturally be expected, the summer months show a marked decline in the number of deaths from the enumerated causes.

DIARRHŒA.

Under a local provision this disease is notifiable in children under two years of age, from July 1st to October 31st of each year. Within this period 12 cases were notified, as compared with 21 in 1925, 4 in 1924, and 2 in 1923.

The deaths numbered 15, which is the lowest figure as yet recorded. (*See Table* 9). Of these deaths 9 occurred under 1 year of age. Two deaths occurred between 2 and 5 years, one between 5 and 10 years, two between 55 and 65 years, and one over 65 years. The death-rate per 1,000 births for the under 1 year group was 5·2. In 1925 it was 4·7. When the large mortalities which were experienced year by year in the first decade of the present century are recollected, the pronounced improvement is a most satisfactory feature. The reason for this decline must be attributed largely to two agencies. Firstly, the work of the Health Visitors and Infant Welfare Centres, whose efforts have led to a better standard of motherhood ; and secondly, to the gradual improvement in the sanitary environment. The year under review was hot during the late summer months, a period of the year when this disease is particularly liable to manifest itself. In 1926 Hygiene and commonsense had so far triumphed as to be able to record the satisfactory figures given above. The death-rate of Diarrhœa for England and Wales per 1,000 births for children under 2 years of age was 8·7, and for Blackburn it was 5·2.

NON-NOTIFIABLE INFECTIOUS DISEASES IN CHILDREN UNDER SCHOOL AGE, 1926.

Measles	15
Chicken Pox	20
Whooping Cough	23
Mumps	0

SMALL POX.

Vaccination Return for the Year 1926.

I am indebted to Mr. G. G. Dickinson, the Vaccination Officer, for the figures necessary to compile the subjoined Table.

TABLE 24.

Month	Births	Successfully Vaccinated	Exempted	Died Unvaccinated	Vaccination Postponed	Removed not traced	Removed traced	Unaccounted for	Insusceptable
January . .	141	52	71	12	3	1	1	1	—
February .	133	53	67	7	1	1	—	4	—
March . . .	179	74	80	14	4	1	—	6	—
April	142	49	69	14	0	—	1	9	—
May	172	63	79	16	2	—	3	9	—
June	151	51	80	8	1	—	2	9	—
July	130	43	68	10	—	—	2	5	2
August	183	55	96	13	4	1	—	14	—
September . .	148	36	77	14	2	2	1	16	—
October. . . .	146	27	83	10	2	—	—	24	—
November . .	133	21	73	7	1	—	1	30	—
December . .	147	17	56	14	—	1	—	59	—
Totals .	1805	541	899	139	20	7	11	186	2

In a total of 1.805 births in Blackburn, 541, or 29·97% were successfully vaccinated, 998. or 49·80%, were exempted, and 186, or 10·30% were unaccounted for. Some of these latter may become vaccinated at a later date. The successful vaccination percentage is practically the same as in 1925. The exemption figure has fallen from 51·2%.

A Leaflet supplied by the Publicity Committee on Health is distributed by the Vaccination Officer.

A Report on a small outbreak of Small Pox in Blackburn during 1926 is appended. It is fortunate that this outbreak occurred in an institution, and was speedily recognised, otherwise the disease might, in view of the unvaccinated condition of the majority of the population, have assumed epidemic proportions, and thereby caused serious dislocation of the trade of the town. In textile towns especially is Small Pox a disturber of the economic peace, as traders are chary of doing business in view of the opinion that the disease is prone to be carried on fabrics.

The cost of this small outbreak was £49. If it had spread that figure might well have been multiplied a hundred fold or more.

In view of the relatively meagre number of persons who are effectually vaccinated, and the serious consequences which might result if the disease should break out in Blackburn, it is justifiable to insert the following résumé from the Annual Report for 1924 of the Chief Medical Officer of the Ministry of Health. After stating categorically that " whatever be the imperfections of the Vaccination Laws, or rather vaccination system as practised in England, the protection which vaccination and re-vaccination may afford cannot be disputed by anyone who has had actual experience in dealing with this disease." He goes on to say, " The long experience of this country has taught us—

(*a*) That beyond all question the mortality from Small Pox is much less now than in prevaccination times.

(*b*) That the greatest diminution in the Small Pox mortality is found in the early years of life in which there is most vaccination.

(*c*) That in countries in which there is adequate vaccination and re-vaccination relatively to the population, there is little Small Pox.

(*d*) That in houses invaded by Small Pox in the course of an outbreak. not nearly so many of the vaccinated inmates are attacked as of the unvaccinated in proportion to their numbers.

(*e*) That the fatality rate among persons attacked by Small Pox is much greater, age for age, among the unvaccinated than among the vaccinated.

(*f*) That the degree of protection conferred by vaccination corresponds to the quality of the vaccine and to the thoroughness with which the operation of vaccination has been performed.

(*g*) That the protection afforded by vaccination wanes with lapse of time.

(*h*) That improved sanitation, however beneficial in itself, cannot account for these facts.

(*i*) That though early diagnosis, prompt isolation of Small Pox patients in suitable hospitals, effective disinfection, supervision of 'contacts,' and other such public health methods are invaluable, they are no substitute for vaccination."

REPORT ON OUTBREAK OF SMALLPOX.

On June 8th, 1926, at 10 p.m., I was asked by the Resident Medical Officer at the Queen's Park Hospital to see two patients whom she thought might be suffering from smallpox. I visited immediately and confirmed the diagnosis, and the cases were removed to Finnington Smallpox Hospital the same night. On June 9th I visited Queen's Park Hospital and examined a number of contacts and diagnosed two as suffering from smallpox. They were removed to Finnington immediately. I continued to pay daily visits to Queens Park Hospital to examine contacts. On June 12th two more cases were diagnosed and removed. On June 13th one case was found and removed. Daily visits were paid until June 15th, after which date Dr. Fleming reported each morning. On June 18th Dr. Roe, an Assistant Medical Officer of Health, saw a suspicious case at 66, Moor Street : a man who had just arrived from Bolton. He was immediately removed to Finnington. On June 25th I saw a patient in Ward D1, Queen's Park Hospital, and diagnosed him as smallpox, and had him removed to Finnington.

The original cases were seen in Ward D1 to which they had been admitted from the male house the day previously, namely, June 7th. Cases 3, 4, 5 and 6 were removed from the male house, case 8 from Ward D1, and case 7 occurred in a common lodging house in the town.

ADMINISTRATIVE ACTION TAKEN IN REGARD TO QUEEN'S PARK HOSPITAL AND WORKHOUSE.

On June 9th the following letter was sent to Dr. Fleming, the Resident Medical Officer at the Queen's Park Hospital :—" Following upon my visit to Queen's Park Hospital yesterday evening, the 8th instant, when I saw with you two cases of suspected smallpox. At the present time I am not prepared to say definitely that these cases are smallpox, but in view, firstly, of the prevalence of this disease in surrounding towns ; secondly, that the two cases were in a somewhat crowded medical ward ; and, thirdly, that they were inmates of a large institution ; I am of the opinion that they should be treated as cases of smallpox until definitely proved to be the contrary. The two cases, as you know, were removed to Finnington last night, and I should be glad if you would vaccinate all contacts, both in the ward and in the house. Until the diagnosis is definitely settled the Institution should be closed to visitors. A daily inspection should be made of all contacts. When once contacts have been vaccinated and the daily inspection has been initiated there is no reason for them to be strictly quarantined. It will be safe for tradesmen, etc., to deliver goods as usual, and also for meals to be sent to the Cottage Homes. If I, or any member of my staff, can assist you at all in the vaccinations or any other way, please do not hesitate to let me know."

On June 10th this letter was amplified and sent to the Clerk to the Guardians, the Medical Officer of Queen's Park Hospital, and the Master of the Institution :—

" Arising out of the outbreak of suspected smallpox at the Queen's Park Institution, I should be glad if the following procedure could be adhered to :—

1. A daily medical inspection of all inmates.

2. Vaccination or re-vaccination of those who are willing to be vaccinated. When once attendants or workmen have been vaccinated and provided the daily medical observation is carried out it will not be necessary for them to be quarantined. Cases which refuse vaccination should, however, not be allowed to enter or depart from the Institution at their own free will.

3. I should be glad to be supplied with the names and addresses of all departures from the Institution during the past three weeks ; also the names and addresses of all permanent employees of the Institution, if they are living outside.

4. Thorough disinfection of any infected bedding, clothing, etc., and of implicated wards or rooms should be done immediately after the removal of a case.

5. I should be glad if in any doubtful case the Medical Officer of the Institution would get in communication with me, when I will visit and see the case with the Medical Officer.

6. The Institution should be closed to visitors for a period of at least sixteen days since the occurrence of the last case, and I would advise also that the casual wards be closed for the next fortnight, but should a casual present himself or herself at the Institution and show evidences of a suspicious rash on the face or hands, I should be glad to be immediately notified."

The names and addresses of all discharges from the Institution during the three weeks prior to June 8th, and of all officers and workmen were given to me by the Master. All those persons who could be found were visited. We urged vaccination, and those who were not vaccinated were visited daily for a period of sixteen days. On June 15th the following letter was sent to the Clerk to the Guardians :—

" In confirmation of my telephonic communication with you this morning, I think it will be wise (1) to stop messengers passing from Queen's Park Hospital to the Guardians' offices during the period that Queen's Park is in quarantine ; (2) that all letters, etc., from Queen's Park Hospital, should be fumigated for at least twenty minutes by means of a fumigation lamp burning in a confined space ; (3) that as this method of repeated fumigation might cause damage to office ledgers, etc., it would be as well for these ledgers to be kept at Queen's Park and then disinfected at the end of the quarantine period."

Queen's Park Hospital (with the exception of Ward D1), was taken out of quarantine, as no further cases had arisen, on June 28th. Owing to the last case in Ward D1, this ward was not allowed out of quarantine until July 8th.

I have received the following report from Dr. G. A. Fleming, Medical Officer of Queen's Park Hospital, of the action taken by her in accordance with my letter of the 10th June :—

" Particulars of people who were vaccinated :—

(i) All the inmates of male house except a few conscientious objectors.

(ii) All the inmates of male infirm ward except a few conscientious objectors.

(iii) All the patients in Ward D1, except one child, whose parents were conscientious objectors.

(iv) All the tradesmen and outdoor staff.

(v) All the indoor staff.

(vi) All admissions and discharged patients.

(vii) A few patients in male and female mental ward who worked on the farm or in laundry.

651 vaccinations were performed.
11 gave no reaction at all.
9 have not yet reported.
4 have died.
623 gave a positive reaction.

Particulars of people examined daily from date of first case :—

1. Contacts in (i) male house,
   ,, (ii) Ward D,
   ,, (iii) male mental ward.
2. Out-door Staff.
3. Indoor Staff, after tenth day after first case was removed.
4. Casuals are examined before they leave the Institution."

In Regard to the Town of Blackburn.

A system of daily visitation by the Sanitary Inspectors to all common lodging houses was put into operation from June 9th until June 28th inclusive, and a daily visitation by Sanitary Inspectors to all houses of contacts over the same period. On June 9th the following circular letter was sent to all general practitioners in the town, and on the same day the Medical Officers of Health of all surrounding districts were notified of the occurrence of smallpox in Blackburn :—" Smallpox has broken out in the Queen's Park Hospital and Workhouse. The cases are the usual prevalent mild type and, so far as can be ascertained, none of them have been in contact during their infective stage with persons resident in Blackburn. I am sending you this letter in order that you may keep the possibility of smallpox in mind, and I shall always be happy to see any cases upon which you may desire a second opinion in this regard."

The following letter was sent from time to time to Medical Officers of Health of surrounding districts when any movement of contacts was to take place :—

"The undermentioned persons whose names are given have been in contact with a case of smallpox. They have given their addresses as stated."

The Sanitary Inspectors during their visits to Common Lodging Houses and the homes of contacts, were instructed according to the memorandum appended :—

"Please institute a daily visit to the houses of the persons whose names are mentioned hereunder. The visitation should extend over the next fortnight."

An enquiry was received from the Ministry of Health asking what steps were being taken to deal with the outbreak, and the following memorandum was submitted to the Town Clerk of Blackburn detailing the administrative measures taken :—

"In reply to your memorandum of the 11th instant, enclosing copy letter from the Ministry of Health *re* Smallpox, I beg to make the following observations thereon :——Prompt and adequate steps have been taken to deal with the outbreak and the procedure laid down in Memo. 71A of the Ministry has been followed. I enclose copy of a letter which I wrote to the Clerk to the Guardians, the Master of the Queen's Park Institution, and Dr. Fleming, Medical Officer, and also copy of a letter I sent to Dr. Fleming alone. These two letters will, I think, indicate clearly the lines which I have laid down in so far as the institution is concerned. In addition, my Sanitary Inspectorial Staff are visiting daily each Common Lodging House in the town. They are visiting daily also the families of all persons employed in the Institution. and will do so for the next sixteen days. The names and addresses, in so far as is known, of all admissions and discharges to the Institution, including casuals, have been furnished to me by the Guardians, and are being followed up, and any resident in Blackburn are being visited daily. The Medical Officers of Health of districts concerned in the list have been communicated with. Dr. Fleming informs me that she has vaccinated upwards of 500 inmates of the Institution (the precise figures will be given later), and I think we can claim that all the provisions of the Ministry have been more than completely carried out."

Common Lodging House, 66, Moor Street.

This case, who was seen on June 18th, had been vaccinated at the Bolton Union two days previously. He was seen at 66, Moor Street, within two hours of his arrival, and was removed immediately to Finnington.

All contacts in the Common Lodging House willing to be vaccinated were vaccinated on June 19th by Dr. O'Driscoll; eight refused. The vaccinated persons were allowed their liberty, but those who refused were strictly quarantined until June 22nd, when, after a visit by the Medical Officer of Health, they all consented to be vaccinated. Vaccination was immediately performed and the men were released. All rooms, bedding, etc., were disinfected and cleansed. Daily visiting was continued until July 5th. No further cases occurred. Twelve other persons were vaccinated by the Medical Officer of Health as indirect contacts of cases at Queen's Park Hospital. In regard to the measures taken at 66, Moor Street, an interesting point arose concerning the payment of unemployment benefit, and I sent the following letter on June 26th to Mr. T. Robinson, the Manager of the Employment Exchange:—" *Smallpox—Unemployment Benefit of Quarantined Persons.*—I should be glad if you would give me a ruling as to the position in respect of men who may be unable to draw unemployment benefit in person or to sign on as required by the Regulations, owing to their quarantine as smallpox contacts. This matter has not arisen in Blackburn since the inception of the Unemployment Benefit Scheme, but it is likely, in view of the prevalence of smallpox throughout Lancashire, to arise from time to time in the future. We are having considerable trouble with certain men who have been refused their unemployment benefit this week, apparently because they were unable to comply with the requirements, *re* signing on, etc. The reason why they could not comply was because from Thursday, June 17th, until Monday, June 21st, they were confined to their quarters as unvaccinated contacts of smallpox."

Mr. Robinson replied on July 1st as follows:—" I am in receipt of your letter of the 26th June, 1926, enquiring as to the position in respect of insured contributors who may be unable (1) to draw unemployment benefit in person, or (2) to sign the unemployed register as required by regulations, owing to quarantine as smallpox contacts. In reply I have to inform you that personal attendance at the Exchange in order to make a claim to benefit is excused in cases of infectious disease at a claimant's residence. Normally, a claimant would be instructed by post to attend at the Exchange immediately after the Medical Officer of Health had certified him free from infection or contagion. In necessitous cases, however, a claim form, accompanied by a form of certificate, U.I.293. (copy attached) would be forwarded to the claimant who would be instructed to pass the completed forms with his (her) unemployment book to the Medical Officer of Health for disinfection and to ask the Medical Officer of Health to forward the documents to the Exchange, with the certificate duly completed, and a statement as to whether the claimant was capable of work. *Evidence of Unemployment.* Excuse from signature of the Unemployed Register would be allowed by the use of Form U.I. 293, addressed direct to, and returned duly completed and signed by, the Medical Officer of Health, and accompanied by a statement as to whether the claimant was capable of work. These documents would be referred to the Chief Insurance Officer, Kew, for decision as to (1) whether the claimant may be excused from signing for the period of his isolation, or (2) whether Form U.I. 293 should be furnished weekly. *Payment of Benefit.* If benefit is due to a person suffering from or in contact with or under observation through having been in contact with any notifiable infectious or contagious disease, and application is made for payment, through a deputy or otherwise, the Medical Officer of Health would be consulted as to whether payment may safely be made to the claimant, or his deputy, as the case may be, and if so, whether any special precautions should be taken. The above indicates the procedure designed by the Department to meet the peculiar circumstances of such cases, and I should be happy to co-operate with you in any steps which can be taken in the interests of the men themselves, while bearing in mind the necessity for the protection of the public health."

Possible Source of Infection. It is thought that smallpox was introduced into the Queen's Park Institution by a vagrant who was proceeding from town to town. All the cases attacked had been resident in the Institution for three months and upwards. About this time sporadic cases were arising in a chain of towns in the district, which pointed strongly to an undetected ambulant case.

TABLE 25.

Clinical History of Cases.

No. of Case.	Initials.	Age and Sex.	Where from.	Vaccination, No. of Marks.	Date of Onset of Illness and Symptoms.	Date of Rash and when first appeared.	Type of Rash when seen.	Duration of Illness and its chief characteristics.	Result of Vaccination done after onset of illness.	No. of days in Hospital.	Result.	Remarks.
1	J. R.	M. 72	Q.P.H. Ward D1.	Infancy, 2 faint.	3/6/26. Sickness, drowsiness and pain in chest.	7/6/26. First noticed on chest, then on forehead and face.	Vesicles and pustules. Discrete round with even areola.	When seen rash was thickest on face and upper part of chest and back. Also on palms of hands, and very scanty on arms and legs.	Did not take.	29	C.	
2	J.T.P.	M. 57	Q.P.H. Ward D1.	Infancy, 3 faint.	A few days previously ? 6/6/26. Sickness, backache.	7/6/26. Forehead.	Vesicles and papules. Semi-confluent on face: round with even areola.	Was severely ill for a week. Semi-confluent rash on face. Thickly discrete on upper part of trunk, thighs and palms of hands, and less on soles of feet. Very slight on abdomen and legs.	Do.	33	C.	Mentally defective: old T.B. hip disease with 5-in. shortening and sinus formation.
3	L. M.	M. 45	Q.P.H. Male House	Infancy.—In the Army, 1917, 5 marks.	About 29/5/26. Headache, pain in back and nausea.	2/6/26. Face and legs (Also has scabies).	Scabbing, very scanty rash.	A few spots on hands and face, none on arms, a few on thighs and legs, two on trunk	Did not take.	24	C.	This man was not ill whilst in hospital. He was apparently the original case in Q.P.H., where he had been for three months.
4	J. T.	M. 67	Q.P.H. Male House	Infancy, 2 good, 1 faint.	2/6/26. Headache, pain in the back and nausea.	6/6/26. Upper chest and face.	Vesicles and sl. pustulation, well marked round areola.	Thickly discrete on face and head, a few spots on shoulder, girdle, arms, hands, legs and thighs. Rather ill for 3 days but soon recovered.	Did not take.	24	C.	

Clinical History of Cases—*Continued.*

No. of Case.	Initials.	Age and Sex.	Where from.	Vaccination, No. of Marks.	Date of Onset of Illness and Symptoms.	Date of Rash and when first appeared.	Type of Rash when seen.	Duration of Illness and its chief characteristics.	Result of Vaccination done after onset of illness.	No. of days in Hospital.	Result.	Remarks.
5	J. R.	M. 50	Q.P.H. Male House	Infancy, 3 good marks.	8/6/26. with headache and some sickness	10/6/26.	Vesico-pustular, well marked round areola.	Thickest on face, then on hands and upper part of trunk; very few on legs or arms; none on abdomen.	Did not take.	28	C.	Mentally deficient (melancholic).
6	J. R.	M. 69	Q.P.H. Male House	Infancy, 3 very faint marks.	9/6/26 ? With headache.	10/6/26 Probably: face and upper part of chest.	Vesico-pustular, well-marked areola.	Thickest on face and distal ends of arms and hands and feet, none on back, a few on abdomen and thighs.	Did not take.	32	C.	Keloid formation at site of vaccination.
7	J. L.	M. 76	Q.P.H. Male House	Infancy, 2 faint marks.	8/6/26, with headache and nausea and pains in legs and body.	10/6/26	Vesico-pustular, well-marked areola.	Thickest on face, very scanty elsewhere; two spots on right palm.	Did not take.	27	C.	
8	F. I.	M. 14	Q.P.H. Ward D1.	Not vaccinated.	23/6/26, headache.	25/6/26, on forehead.	Papular.	Thickest on face, then arms and hands, back and legs, two spots on soles of feet.	Did not take. Vaccinated 29/6/26.	23	C.	This boy was the only contact of cases 1 & 2 in Ward D1 who was not vaccinated. His parents refused permission.
9	L. D.	M. 53	66, Moor St.	Time of S. African War, and on 16/6/26 at Bolton Union.	Has never felt ill.	8/6/26, on right forearm.	Pustular, ill-defined areola.	This case was not a typical one of small-pox. No symptoms of illness whilst in hospital apart from the rash.	Did not take.	30	C.	Doubtful case.

Deductions from Outbreak. Blackburn was fortunate, in as much as these cases occurred in an institution where it was possible to exert a very strict supervision and control. The present laxity in the administration of the Vaccination Acts constitutes a real danger, as smallpox is widely prevalent and is showing signs of some increase of virulence. Although strict precautions such as detailed above assist in the delimitation of spread, yet vaccination still remains the sheet anchor against the epidemic spread of smallpox. It is not sufficiently realised that in order to ensure immunity it is necessary for re-vaccination to be carried out in early adult life. A serious difficulty in the present method of vaccination in infancy makes itself felt in the difficulty with which the modified type of smallpox caused thereby can be diagnosed, and it would perhaps be preferable for vaccination to be entirely abandoned in infancy rather than done in a haphazard manner. I wish to thank Dr. G. A. Fleming and Mr. Roberts, of the Queen's Park Hospital, for the very cordial co-operation which they gave my Department in dealing with this outbreak. The Sanitary Inspectorial staff also deserve every credit for the conscientious and efficient manner in which they carried out their daily visitations.

CORPORATION HOSPITAL.

The Fever Hospital is situated in Park Lee Road on a site of 10½ acres and at a height of 560 feet above sea level.

There are provided 40 beds for Scarlet Fever, 16 beds for Diphtheria, 10 beds for other Infectious Diseases, 34 beds for Tuberculosis, and 20 beds for Pre-Tubercular and Delicate Children, who are able to attend the Open Air School at the Hospital. The Open Air School is held in one of the original Scarlet Fever Ward blocks, and is well away from any of the wards now taking in infectious cases. Should a severe epidemic of infectious disease arise in the town, or in the area of any of the authorities under contract to send patients, it would be necessary for the Open Air School block to revert to its original function.

A modern X-Ray apparatus is fixed in the old outbathing station in the Hospital precincts and near the Lodge gates. An Ultra-Violet light apparatus consisting of two short flame carbon arc lamps and a mercury vapour lamp are fitted in the Ante-room to the Open Air School Ward. Since its installation this plant has done a considerable amount of work for the Maternity and Child Welfare, the Tuberculosis and the School Departments. (*See* page 206).

During the year several improvements were carried out to the structure of the Hospital, especially re-roofing with slates the weather side of the Administrative block. The original tiled roofing used throughout is rapidly disintegrating.

The stock of linen, etc., for use in the Wards and Home has been replenished. It had been allowed to fall very low and many of the beds and mattresses were in a bad state of repair. These have been renewed. Furniture has been obtained for the Nurses' rooms and the Nurses' bedrooms have been, in one section of the building, redecorated. It is proposed to continue with this next year. Alterations are in hand to provide enclosed verandahs to Ward III, and so make this block suitable for the nursing of cases of Puerperal Pyrexia.

The average cost per patient per week for food only in 1926 was 10/10. For the early part of 1927 it was 8/3. The total cost (including capital charges) for the financial year ended March 31st, 1926, per patient per week was £3/7/0.

The Hospital has been recognised as a Training School for Fever Nurses by the General Nursing Council. At present there are six probationers receiving Training.

It is the practice to allow two visitors to each patient in the Corporation Hospital, on two afternoons a week, *viz.*, Wednesdays and Sundays, from 2 to 3. On the whole their conduct has been orderly, but occasionally trouble arises with visitors who do not appreciate that rules are made to be kept. Each parent signs a declaration before a patient is admitted that he or she will abide by the rule relating to visitation. Breaches of this rule are, therefore, also breaches of good faith. I am firmly convinced that, in so far as the Diphtheria and Scarlet Fever patients are concerned, the policy of allowing visitors at all is a mistaken one, both from the viewpoint of the patient's welfare and from the mental effect upon the parents.

The disobedience of a visitor to a case of Scarlet Fever was the direct cause of a severe onset of choking which nearly brought about a fatal result, and in some other cases the visitors have displayed towards medical and nursing requisites a regrettable lack of regard which cannot but act deleteriously. No doubt a mistaken sense of compassion is the cause of this attitude ; but, whatever the cause, it does not lighten the task of the nursing or medical staff in their endeavours to bring about recovery. It is to the interest of all concerned in the care and treatment of a patient to effect recovery as expeditiously as possible. To see the unremitting care of several weeks gravely jeopardised by a few minutes thoughtlessness on the part of a parent is not an encouragement.

To the visitation of Tuberculous patients or of the Residential School Children there is nothing adverse to be said so long as the rules of the Hospital are observed by visitors.

TABLE 26.

Corporation Hospital.

	Patients remaining in Hospital on January 1st, 1926.			*Patients admitted and Discharged in 1926.*			*Patients remaining in Hospital on December 31st, 1926*			*Analysis of all cases admitted in 1926 whether discharged or not during the year.*					*Average number of beds occupied during 1926*	*Cases removed expressed as a percentage of total notified*
	Total	*Re-cover'd*	*Died*	*Total*	*Re-covered*	*Died*	*Total*	*Re-covered*	*Died*	*Total*	*Re-covered*	*Died*	*Case Mor-tality*	*Av. No of days in Hosp'l*		
Scarlet Fever	20	20	—	177	175	2	15	15	—	212	210	2	0·94	37·1	21·5	76·1
Diphtheria	6	6	—	82	73	9	8	8	—	96	87	9	9·37	30·7	8·0	90·1
Enteric Fever	—	—	—	9	6	3	—	—	—	9	6	3	33·33	35·0	0·8	88·8
Measles	2	2	—	12	11	1	3	3	—	17	16	1	5·88	16·3	0·7	—
Erysipelas..	—	—	—	1	1	—	—	—	—	1	1	—	0·00	18·0	0·04	2·2
Tuberculosis	30	15	11	56	44	12	33	9	5*	115	68	23	19·32	106·1	33·4	—
Chicken Pox	1	1	—	21	21	—	1	1	—	23	23	—	0·00	18·6	1·2	—
Other Diseases.. ..	—	—	—	13	11	2	2	1	1	15	12	3	21·43	45·5	1·7	—
Pre-Tubercular and Delicate Children..	20	17	—	17	17	—	16	4	—	50	38	—	0·00	125·5	18·3	—
Puerperal Fever ..	—	—	—	3	2	1	—	—	—	3	2	1	33·33	8·7	0·7	18·1
Puerperal Pyrexia ..	—	—	—	2	2	—	—	—	—	2	2	—	0·00	33·0	0·2	18·1
TOTALS	79	61	11	393	363	30	78	41	6	543	465	42	7·73	55·0	81·8	—

*These deaths occurred in 1927, and will be included in next year's returns.

The Table gives an analytical summary of all the cases treated in the Corporation Hospital in 1926. It was a busy year. Out of a total of 110 beds, 82 have been continuously occupied, *i.e.*, 74·5%. Three hundred and ninety-three patients were admitted and discharged during the year, whilst including patients in at the commencement of 1926 (79) and at the end of 1926 (78), a total of 543 cases were dealt with. Forty-two died, giving a case mortality for the whole Hospital of 7·7. The case mortality for the acute infectious fevers was 4·2.

The average number of days of each patient in Hospital, for all classes of patients, was 55·0. For the Tuberculous cases alone it was 106·1 ; for the Residential School Children, 125·5.

All the available beds for cases of Pulmonary Tuberculosis were continuously occupied, as were those allocated to the Pre-Tuberculous school children.

The following Authorities had arrangements with the Blackburn Corporation whereby cases of infectious disease occurring within their jurisdiction could be admitted to the Corporation Hospital :—Accrington Borough, Rishton U.D.C., Oswaldtwistle U.D.C., Blackburn Rural D.C., cases from the Royal Infirmary, Blackburn, and cases from Queen's Park Hospital ; Fylde Water Board.

Similar arrangements with regard to admissions of Small Pox cases to Finnington have been made with : Blackburn Rural D.C., Withnell U.D.C., Clitheroe R.D.C., Chorley Joint Hospital Board, Clitheroe Borough, Bowland R.D.C., Great Harwood U.D.C., Croston U.D.C., and Settle U.D.C. Five Cases of Small Pox were admitted from Chorley Borough, and one case from Slaidburn.

SCARLET FEVER.

The total number of cases admitted during the year as Scarlet Fever was 192. Of these, 2 were negative cases, leaving 190 true cases admitted as such. This is a decrease of 67 on last year's total.

One hundred and sixty-six were cases from within the Borough, and 26 from areas outside the Borough. A decrease in Borough cases of 83, and an increase of out-Borough cases of 16. There was one " return " case during the year.

The following complications and sequelæ occurred amongst the Scarlet Fever patients :—

TABLE 27.

Complication.	*No. of Cases.*
Adenitis	25
Otorrhœa	3
Measles	4
Rhinorrhœa	24
Albuminuria	6
Herpes	2
Rheumatism	1
Hæmaturia	1
Mumps	1
Arthritis	2
Impetigo	2
Nephritis	3
Double Otorrhœa	1
Blepharitis	1
Septic Fingers	4
Tonsillitis	1
Valvular Disease	1
Cardiac Failure	2
Toxæmic Scarlet Fever	3
Pneumonia	4

The 2 cases admitted as Scarlet Fever, but later proved not to be suffering therefrom, are included in the above Table. One of these was a case of Rubella and the other Tonsillitis.

The following Table gives the ages and sexes of the patients admitted :—

TABLE 28.

Ages.	*Males.*	*Females.*	*Totals.*	*Deaths.*
1— 2 years	1	1	2	—
2— 3 ,,	8	2	10	1
3— 4 ,,	5	8	13	—
4— 5 ,,	8	17	25	—
5—10 ,,	41	45	86	—
10—15 ,,	16	23	39	—
15—20 ,,	—	9	9	—
20—25 ,,	—	4	4	—
25—30 ,,	1	2	3	1
30 and over	—	1	1	—
Total, 1926	80	112	192	2
Total, 1925	118	141	259	3
Total, 1924	27	35	62	1
Total, 1923	77	104	181	—

The following Table shows the percentage of Scarlet Fever removals in Wards, 1926 :—

TABLE 29.

Ward.	*Percentage.*	*Percentage* 1925
St. Stephen's	60·0	66·6
Trinity	60·0	93·3
St. Michael's	76·9	68·7
St. John's	86·6	94·1
St. Silas's	60·0	62·5
St. Paul's	81·8	91·1
St. Peter's	33·3	91·6
St. Mary's	100·0	100·0
St. Matthew's	82·3	83·3
St. Thomas's	80·8	77·7
Park	84·2	96·8
St. Luke's	100·0	61·2
St. Mark's	75·0	86·6
St. Andrew's	73·7	71·7
TOTAL	76·1	81·9

Monthly Admissions of Scarlet Fever Cases to the Corporation Hospital during 1926 :—

TABLE 30.

				1925.	
Month.	*Cases Notified.*	*Cases Removed.*	*Percentage of Removals.*	*Cases Notified.*	*Percentage of Removals.*
January	16	13	81·2	12	75·0
February	19	14	73·7	15	100·0
March	15	11	73·3	32	62·5
April	7	4	57·1	26	73·0
May	16	16	100·0	27	74·0
June	23	18	78·2	20	95·0
July	16	15	93·7	34	82·3
August	17	10	58·8	25	100·0
September	24	19	79·1	33	87·8
October	37	25	70·0	38	86·8
November	20	13	65·0	25	80·0
December	8	8	100·0	17	70·5
TOTAL	218	166	76·1	304	81·9

If Table 30 is read along with Table 18 relating to room space and number of persons per acre, it will prove more interesting. St. Mary's Ward shows 100% removals, and this ward also shows the worst figures in relation to room space.

DIPHTHERIA.

Ninety cases were admitted to the Hospital certified as suffering from Diphtheria. Two cases were negative, leaving 88 true cases of this disease. The two negative cases proved to be suffering from Follicular Tonsillitis. This is an increase in cases of 23 over 1925.

There were 17 cases admitted from outside the Borough, an increase of 8.

Of the 88 cases of true Diphtheria, 7 had the larynx affected, and Tracheotomy was necessary in five cases. Two of the cases died; the others recovered. There were no return cases of Diphtheria.

The following complications and sequelæ occurred among the Diphtheria patients :—

Complete Palatal Paralysis	3
Paralysis of Lower Limbs	3
Broncho-Pneumonia	1
Laryngeal Diphtheria-Tracheotomy	2
Cardiac Failure	4

TABLE 31.

Incidence of Diphtheria Cases Admitted to Hospital.

Ages.	*Males.*	*Females.*	*Totals.*	*Deaths.*
Under 1 year..	2	1	3	—
1— 2 years..	3	1	4	2
2— 3 years..	2	1	3	—
3— 4 years..	5	—	5	—
4— 5 years..	7	6	13	1
5—10 years..	19	19	38	6
10—15 years..	2	12	14	—
15—20 years..	—	1	1	—
20—25 years..	1	3	4	—
25 years and over ..	1	4	5	—
Totals, 1926	42	48	90	9
Totals, 1925	27	40	67	6
Totals, 1924	19	29	48	2

The following Table shows the percentage of Diphtheria removals in Wards, 1926 :—

TABLE 32.

Ward.	*Percentage.*	1925 *Percentage.*
St. Stephen's	100·0	75·0
Trinity	100·0	66·6
St. Michael's	50·0	100·0
St. John's	100·0	100·0
St. Silas's	66·6	100·0
St. Paul's	100·0	81·8
St. Peter's	0·0	75·0
St. Mary's	62·5	100·0
St. Matthew's	100·0	100·0
St. Thomas's	100·0	100·0
Park	100·0	83·3
St. Luke's	100·0	77·7
St. Mark's	100·0	100·0
St. Andrew's	93·7	80·0
TOTAL	90·1	86·5

Nine of the Wards showed a hundred per cent. removal. Diphtheria is not a highly infectious disease, but it is a very dangerous one if proper nursing and treatment are not carried out.

The monthly incidence of Diphtheria was :—

Month.	*Cases Notified.*	*Cases Removed.*	*Percentage of Removals.*	1925. *Cases Notified.*	 *Percentage of Removals.*
January	2	2	100·0	6	83·3
February	5	5	100·0	8	75·0
March	5	3	60·0	5	100·0
April	5	5	100·0	1	100·0
May	3	2	66·6	3	100·0
June	9	8	88·8	3	33·3
July	2	2	100·0	2	100·0
August	3	3	100·0	11	100·0
September	13	12	92·3	14	71·4
October	12	11	91·6	7	100·0
November	10	10	100·0	3	100·0
December	12	10	83·3	4	100·0
TOTAL	81	73	90·1	67	86·5

ENTERIC FEVER.

Age Period.	*Males.*	*Females.*	*Total.*	*Deaths.*
Under 10 years	—	—	—	—
10—15 years..	—	2	2	1
15—25 years..	1	1	2	—
25—35 years..	1	1	2	—
35—45 years..	—	1	1	—
55 and upwards	—	2	2	2
TOTAL..	2	7	9	3

The number of cases admitted as Enteric Fever rose from 3 in 1925 to 9 in 1926. Two cases were, however, not suffering from Enteric Fever. Both these cases died ; one, a woman of 67, from Uterine Cancer, and the other, a girl of 10 years, from double lobar pneumonia. One case of Enteric Fever was admitted from outside the Borough.

In three cases, the consumption of shellfish (mussels and cockles) was the only cause ascertainable. It is appropriate in this place to warn the public against eating shellfish unless their freedom from objectionable contamination can be vouched for. In spite of the very stringent watch kept in Blackburn on this food commodity, and the generally loyal carrying out of our instructions by the reputable fish dealers in the town, there are, unfortunately, occasions when shellfish from an undesirable source are sold by vendors who evade, or are in ignorance of, our standards.

MEASLES.

Fifteen cases were admitted to the Hospital. Of these 11 cases were admitted on the recommendation of their private doctors, and four cases were admitted from Queen's Park Hospital. All the cases sent by private medical men were of a severe type ; broncho-pneumonia being the reason for the request for admittance.

The following table gives the ages at which the disease occurred in those cases admitted, their sexes, and the deaths occurring.

TABLE 33.

Ages.	*Males.*	*Females.*	*Totals.*	*Deaths.*
0— 1 year	2	—	2	—
2— 3 years..	—	—	—	—
3— 4 years..	—	3	3	—
4— 5 years..	1	2	3	—
5—10 years..	3	3	6	—
10—15 years..	—	—	—	—
15 years and over ..	—	1	1	1
TOTAL..	6	9	15	1

Death in one fatal case was due to Broncho-Pneumonia.

OTHER DISEASES.

AGE PERIODS.

Disease.	0—1		1—2		2—5		5—15		15—25		25—35		35—45		45 & up		Total	Deaths
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Encephalitis Lethargica	–	–	—	–	–	1	–	–	–	–	–	1	–	1	–	–	3	2
Chickenpox	–	1	–	2	7	7	4	–	–	1	–	–	–	–	–	–	22	–
Puerperal Fever ..	–	–	–	–	–	–	–	–	–	1	–	1	–	1	–	–	3	1
Puerperal Pyrexia ..	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–	–	2	–
Erysipelas	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–
Tonsillitis..	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1	–
Ophthalmia Neonatorum ..	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–
Malaria & Dysentery	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	1	–
Marasmus	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–
Whooping Cough ..	1	–	–	–	1	2	–	–	–	–	–	–	–	–	–	–	4	1
Anthrax	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1	–
No Disease	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	2	–
Other Diseases ..	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1	–
	4	1	–	2	9	10	4	1	1	3	1	4	1	2	–	–	43	4

TABLE 34.

OUT OF BOROUGH CASES.

Disease.	*Males.*	*Females.*	*Total.*	*Deaths.*
Scarlet Fever..	13	13	26	1
Diphtheria	11	6	17	3
Puerperal Fever	—	1	1	1
Enteric Fever	—	1	1	—
Measles	1	1	2	—
Chickenpox	4	3	7	—
Anthrax	1	—	1	—
TOTAL	30	25	55	5

The districts from which the above cases came were :—

Scarlet Fever.—Oswaldtwistle, 6 cases ; Rishton, 4 cases ; Mellor Brook, 4 cases ; Billington, 2 cases ; Witton Park, 2 cases ; Accrington, Balderstone, Clayton-le-Dale, Feniscowles, Mellor, Osbaldeston, Tockholes, and Whalley, one case in each instance.

Diphtheria.—Oswaldtwistle, 5 cases ; Rishton, 5 cases ; Cherry Tree, 3 cases ; Accrington, 2 cases ; Clitheroe and Feniscowles, one case each.

Chicken Pox.—Darwen, 3 cases ; Bolton, Great Harwood, Oswaldtwistle, and Tockholes, one case each. Four of these cases were, at the time of removal to Hospital, resident in the Queen's Park Institution.

The two Measles cases came from Church and Darwen respectively. These children were resident in the Cottage Homes. The Puerperal Fever case came from Rishton ; the Enteric Fever from Great Harwood ; the Anthrax case came from Accrington.

ADMISSIONS FROM THE BLACKBURN ROYAL INFIRMARY.

	Male.	*Female.*	*Total.*	*Deaths.*
Chicken Pox	2	—	2	—
Measles	—	1	1	—
TOTAL	2	1	3	—

ADMISSIONS FROM QUEEN'S PARK HOSPITAL.

	Male.	*Female.*	*Total.*	*Deaths.*
Scarlet Fever..	2	—	2	—
Chicken Pox	—	4	4	—
TOTAL	2	4	6	—

Cases from the Blackburn and East Lancashire Royal Infirmary and Queen's Park Hospital are included in the Out-of-the-Borough Table, if the cases sent were not residents of Blackburn.

THE RESIDENTIAL OPEN AIR SCHOOL.

Although I have dealt with this subject in the Report on the work of the School Medical Service, as the majority of the little inmates are Tuberculous or Pretuberculous, details relating to them are relevantly included here.

At the beginning of 1926 there were 8 boys and 12 girls in residence. Of these, 2 had Tubercular Glands, 6 early Pulmonary Tuberculosis, 1 had been a contact of an advanced case of Tuberculosis, 7 were classed as Pretubercular, 3 were suffering from Debility, and 1 from Chorea.

During the year 19 boys and 11 girls were admitted. Among these were 2 cases of Tubercular Glands ; 5 of early Pulmonary Tuberculosis, and 9 were Pretubercular ; 5 were suffering from Abdominal Tuberculosis, 8 from Debility and Malnutrition, and 1 from the after-effects of Encephalitis lethargica ; 19 boys and 11 girls were discharged ; these included 2 cases of Glandular trouble ; 5 cases of early Pulmonary Tuberculosis ; 9 Pretubercular ; other Non-Pulmonary Tubercular conditions, 5, and other Non-Tubercular conditions, 9.

At the end of the year 11 boys and 5 girls were in residence. One was suffering from Glandular trouble ; early Pulmonary Tuberculosis was present in 3 instances ; 5 were cases of the Pretuberculous state ; 2 were suffering from other Non-Pulmonary Tuberculous diseases, and 5 had ailments of a Non-Tubercular character.

BACTERIOLOGICAL EXAMINATIONS.

I.—AT THE CORPORATION HOSPITAL.

TABLE 35.

Examination and Material.	*Positive*	*Negative*	*Total*	*Total*
For Diphtheria Bacilli :—	1926	1926	1926	1925
Swabs—				
Private Practitioners	80	247	327	259
Hospital	52	107	159	339
For Tubercle Bacilli :—				
Sputum—				
Private Practitioners	49	141	190	238
Hospital	260	125	385	552
Tuberculosis Dispensary	54	122	176	135
Pus—				
Hospital	2	1	3	2
For Gonococci :—				
Pus—				
Private Practitioners	0	0	0	2
Hospital	0	0	0	0
For Enteric Fever (*Widal*) :—				
Private Practitioners	0	4	4	0
Hospital	0	1	1	1
Excretions—				
Private Practitioners	0	0	0	1
Hospital	0	0	0	2
For Ringworm :—				
Private Practitioners	0	0	0	5
School Medical Service	120	257	377	97
Examination of Urine (*Pus, etc.*) :—				
Private Practitioners	0	0	0	3
Hospital	38	358	396	108
Tuberculosis Dispensary	0	0	0	—
Pleural Fluid	0	1	1	—
Apples tested for Arsenic	0	2	2	—
Totals	655	1366	2021	1744

II.—AT OTHER INSTITUTIONS.

TABLE 36.

Nature of Test.	*Royal Infirmary.*		*Liverpool University.*		*Manchester University.*		*Total.*
	Pos.	*Neg.*	*Pos.*	*Neg.*	*Pos.*	*Neg.*	
For Typhoid—Widal Test ..	–	–	10	10	2	1	23
For Gonococci—							
For Private Practitioners ..	–	–	–	–	2	14	16
For V.D. Clinic (B.R.I.) ..	174	576	–	–	–	–	750
For Spirochetes..	–	2	–	–	–	–	2
Wassermann Test—							
For Private Practitioners ..	–	–	–	–	15	66	81
For V.D. Clinics	–	–	–	–	148	404	552
	174	578	10	10	167	485	1424

In addition to the examinations included in the above Table, the following examinations were made in the Public Health Laboratory, Manchester. Twenty-four samples of the town's drinking water for bacteriological investigation ; 5 samples of shell-fish for similar analysis, 1 sample of fæces for Dysentery, and 1 sample of blood for basophilia. Bacteriological examinations in connection with the milk supply are dealt with in the appropriate section. (*See page* 160).

X-RAY EXAMINATIONS AT THE CORPORATION HOSPITAL.

Three hundred and fifty screenings and 369 films were taken during the year. making a total of 719 exposures. The majority of these were in connection with Pulmonary Tuberculosis ; the remainder were for bone or joint Tuberculosis, and also for patients referred with bony or joint deformities from the Orthopœdic Clinic.

	Screenings.	*Negatives.*	*Total.*
Pulmonary Tuberculosis ..	306	312	618
Bone and Joint Trouble ..	44	57	101
TOTAL	350	369	719

TUBERCULOSIS.

The Tuberculosis Scheme in Blackburn.

There is one Tuberculosis Clinic situated in specially erected premises in Duke Street. The accommodation provided consists of a waiting hall, from which lead out dressing rooms for men and women ; an office, and a nurse's and weighing room. Into this latter the consulting room opens. The premises are heated by gas fires and hot-water pipes, and lighted by electric light. The general arrangement is convenient, but the consulting room is rather dark and noisy, as it is in close proximity to a mill and overshadowed by it.

Clinics are held on Monday, Tuesday, Thursday and Friday afternoons, from 2 to 5 p.m. ; and on Thursday evening from 7 to 9 p.m. The premises are also used once, or, if required, twice monthly for the Orthopœdic Clinic conducted by Dr. Briggs.

At each Tuberculosis session the Tuberculosis Officer, the Tuberculosis Nurse and a clerk are in attendance.

The function of the Dispensary is primarily that of a clearing-house. To it come cases notified by Doctors, or sent by them for diagnosis ; cases under observation after undergoing Sanatorium treatment, and cases under treatment at home. From it are drafted patients for Meathop Sanatorium, or the Corporation Hospital. To the former are sent early cases and also those who have been in the Corporation Hospital and have shown good progress there, but who require a further period of Sanatorium régimè. To the Corporation Hospital are sent the more advanced cases, especially those in an infectious condition, and those whom it is thought will improve sufficiently to be able to be transferred to the more rigorous treatment at Meathop.

Cases attending the Dispensary for observation or treatment come at such intervals as may be directed by the Tuberculosis Officer. The majority of these persons are having treatment from their panel practitioners, and the Dispensary attendance is for the purpose of regular routine examinations in order to note progress. Very few drugs are dispensed at the Clinic, the chief of them being Cod Liver Oil. Various specific modes of treatment are tried in suitable cases.

The number of beds available for Tubercular patients are 9 at Meathop and 34 at the Corporation Hospital. These figures do not include 20 beds (Residential Open Air School) for Pretubercular and Delicate Children of school age.

The Notification and Mortality of Tuberculosis.

One hundred and seventy-six cases of Tuberculosis were notified ; of these, 132 were Pulmonary and 44 Non-Pulmonary ; 69 males and 63 females were notified as suffering from Pulmonary Tuberculosis ; and 21 males and 23 females from Non-Pulmonary. In 1925 the notifications numbered 240 ; in 1924, 150 ; in 1923, 176 ; in 1922, 145 ; and in 1921, 150.

Nineteen deaths were certified as due to Pulmonary Tuberculosis in persons who had never been notified as suffering from the disease during life ; a percentage of the total deaths of 18. This is much higher than in 1925 (4·4).

Of the cases notified in 1926, 15 males and 13 females died from Pulmonary disease during the year, and 2 males from Non-Pulmonary.

TABLE 37.

Age Periods.	New Cases				Deaths.			
	Pulmonary		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under one year	—	—	1	—	1	—	2	—
1— 5 years	—	1	3	—	1	—	1	1
5—10 ,, ...	5	3	7	8	—	1	1	—
10—15 ,, ...	3	2	4	6	1	3	1	—
15—20 ,, ...	14	4	3	—	5	5	—	—
20—25 ,, ...	8	18	1	4	11	17	—	—
25—35 ,, ...	15	20	—	2	6	11	1	1
35—45 ,, ...	12	8	1	1	14	7	1	—
45—55 ,, ...	7	4	1	2	11	2	1	—
55—65 ,, ...	4	3	—	—	4	5	—	—
65 and upwards	1	—	—	—	—	1	—	—
Totals	69	63	21	23	54	52	8	2

The greatest incidence of and mortality from Pulmonary Tuberculosis is between the ages of 25 and 45 years, *i.e.*, the most productive period of life. Herein lies the seriousness and tragedy of this complaint. The Non-Pulmonary incidence is greatest earlier in life—from 5 to 15 years. The largest number of deaths from Pulmonary Tuberculosis was in the 35 to 45 age group. Three deaths from Pulmonary Tuberculosis were recorded under 10 years of age. The incidence of all cases of Tuberculosis per 1,000 of the population is 1·41, of Pulmonary 1·06 per 1,000, and of Non-Pulmonary 0·35 per 1,000. The incidence per 1,000 of the population at the various ages is shown in Table 38. The Registrar-General's figures for mid 1926 are taken as the basis of the calculations.

The deaths in 1926 from Tuberculosis of all forms were 116, compared with 110 in 1925; 111 in 1924; 124 in 1923; 122 in 1922; 101 in 1921; and 111 in 1920. From 1914 to 1919 the deaths each year numbered 156, 151, 144, 155, 163, and 143.

Pulmonary Tuberculosis caused 106 deaths, compared with 90 in 1925; 85 in 1924; 93 in 1923; 96 in 1922. The Pulmonary Tuberculosis death-rate was 0·85 per 1,000, and the Non-Pulmonary 0·08 per 1,000. In 1925 the similar rates were 0·71 and 0·16 respectively.

TABLE 38.

Age Period.	*1921 Census. Population at the age period.*	*Pulmonary.*				*Non-Pulmonary.*			
		Incidence Rate		*Death Rate*		*Incidence Rate*		*Death Rate*	
		Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
0— 5 Years ..	8668	—	·12	·23	—	·46	—	·35	0·12
5—10 Years ..	10213	0·49	0·29	—	·10	0·69	0·78	0·10	—
10—15 Years ..	11497	0·26	0·17	0·09	·26	0·35	0·52	0·09	—
15—20 Years ..	11290	1·24	0·35	0·44	·44	0·27	—	—	—
20—25 Years ..	10656	0·75	1·69	1·03	1·60	0·09	0·36	—	—
25—35 Years ..	20876	0·72	0·96	0·29	·53	—	0·10	0·05	0·05
35—45 Years ..	19878	0·60	0·40	0·70	·35	0·05	0·05	0·05	—
45—55 Years ..	16052	0·42	0·25	0·69	·12	0·06	0·12	0·06	—
55—65 Years ..	10647	0·37	0·28	0·37	·47	—	—	—	—
Over 65 Years ..	9642	0·10	—	—	·10	—	—	—	—

The following were the Wards from which notified patients came :—

TABLE 39.

Ward.	*Density of Population Persons per acre 1921 Census.*	*Pulmonary*	*Non-Pulmonary*	*Total*	*Incidence Rate*	*General Death Rate*
St. Stephen's . .	9·5	8	1	9	0·83	12·4
Trinity	59·1	11	8	19	2·18	11·8
St. Michael's . .	14·4	16	4	20	2·26	9·7
St. John's	71·1	7	1	8	1·13	12·4
St. Silas's	9·1	5	—	5	0·56	11·1
St. Paul's	79·5	8	4	12	1·25	14·1
St. Peter's	50·5	6	3	9	1·36	15·8
St. Mary's	31·8	8	4	12	2·21	22·6
St. Matthew's . .	87·1	14	5	19	2·07	12·1
St. Thomas's . .	7·0	12	3	15	1·27	12·3
Park	14·6	12	5	17	1·82	13·6
St. Luke's	45·1	4	1	5	0·67	13·6
St. Mark's	25·9	8	2	10	0·97	10·8
St. Andrew's . .	11·6	13	3	16	1·52	13·4
	17·0	132	44	176	1·41	12·9

The following Table shows the interval of time elapsing between the date of notification of a patient as suffering from Pulmonary Tuberculosis, and the date of his death from that complaint. In the total of 106 deaths during 1926, 28 (26·4%) were either not notified at all or only notified a month prior to death. Pulmonary Tuberculosis is, in the vast majority of people, a chronic disease, and it rarely kills so rapidly that its entire course is only of a month's duration. It must be concluded that either the unfortunate patients omitted to seek advice until they were compelled by circumstances to do so, or that the medical men in attendance failed to diagnose the condition. The insidiousness and essential chronicity of Tuberculosis is not sufficiently realised by the public. Familiar as they have become with the signs and symptoms of acute disease, they do not recognise the slow advance of Tuberculosis. The diminution of energy, the progressive loss of weight and the cough are not dramatic enough to call for notice. Work is possible—with ever-increasing difficulty and fatigue—in many cases until a very advanced stage of the disease is reached. Most people do not trouble to weigh themselves regularly, thinking this procedure merely an old woman's fad, and in industrial towns the presence of a cough is so general as to have become common-place and worthy of no particular attention. In 52% notification preceded death by six months only.

The notification of Tuberculosis does not show signs of improvement. In 1926 19 fatal cases were never notified. In 1925, the figure was 4 ; in 1924, 7 ; 1923, 10 ; in 1922, 3 ; and in 1921, 8.

INTERVAL BETWEEN NOTIFICATION AND DEATH FROM PULMONARY TUBERCULOSIS.

Not Notified	*Under 1 week.*	1—2 *weeks.*	2—4 *weeks*	1—2 *months*	2—3 *months*	3—6 *months*	6—12 *months*
19	6	1	2	5	7	15	9
One Year	*Two Years*	*Three Years*	*Four Years*	*Five Years*	*Six Years*	*Seven Years*	*Eight Years and Over.*
21	7	4	2	3	2	—	3

TOTAL .. .. 106.

TABLE 40

Occupation and Pulmonary Tuberculosis.

Occupation.	NOTIFICATIONS				DEATHS.				Death Rate from Tuberculosis per 1000 Employees (1925)	
			Incidence Rate per 1000 Employees 1921 Census				Death Rate per 1000 Employees 1921 Census			
	M.	F.	Male	Fem'e.	M.	F.	M.	Fem'e.	Male	Fem'e.
Cotton Weavers	9	29	1·43	1·63	8	20	1·27	1·12	1·11	1·01
Commercial Travellers	–	–	–	–	2	–	5·59	–	–	–
Cotton Winders and Warpers...	–	4	–	0·97	–	6	–	1·46	–	1·21
Hawkers	–	–	–	–	1	–	5·71	–	11·42	–
Housewives	–	8	–	0·34	–	6	–	0·25	–	0·12
Cotton Manufacturers	1	–	3·48	–	–	–	–	–	No deaths.	
Brushmakers	–	–	–	–	1	–	18·18	–	–	–
Engine Fitters	2	–	2·65	–	2	–	2·65	–	2·65	–
Cotton Spinners	1	1	1·23	0·90	1	2	1·23	1·81	2·47	0·90
Chemical Workers	1	–	9·26	–	–	–	–	–	No deaths.	
Cotton Drawers	–	–	–	–	1	–	1·75	–	1·75	–
Clerks..	4	1	2·50	1·60	–	2	–	3·21	1·88	–
Overlookers	–	–	–	–	–	–	–	–	5·31	–
Tailors	–	1	–	2·89	–	–	–	–	6·51	5·78
Dyers	1	–	7·51	–	2	–	15·02	–	–	–
Domestic Servants	–	2	–	1·74	–	–	–	–	–	–
Carters	–	–	–	–	1	–	1·30	–	1·30	–
Glass Bottlemakers	1	–	5·29	–	–	–	–	–	No deaths in 1925.	
Charwomen	–	1	–	3·00	–	1	–	3·00		
Cinema Attendants	1	–	62·50	–	–	–	–	–		
Labourers	11	–	3·69	–	8	–	2·66	–	3·69	–
Licensed Victuallers..	2	–	8·10	–	1	–	4·05	–	–	–
Chimney Sweeps	1	–	100·00	–	1	–	100·00	–	No deaths.	
Laundress	–	–	–	–	–	1	–	3·77	–	–
Hotel Porters	–	–	–	–	1	–	10·00	–	–	–
Pianists	–	1	–	66·66	–	–	–	–	No deaths in 1925.	
Cork Cutters	1	–	*	–	–	–	–	–		
Other Cotton Operatives ..	6	1	3·73	2·27	2	1	1·24	2·27	1·24	–
Coachmen	1	–	1·22	–	1	–	1·22	–	No deaths in 1925.	
Shop Assistants	1	2	0·81	2·32	2	–	1·62	–		
Ex-Service Men	1	–	*	–	4	–	*	–	–	–
Children	8	6	0·60	0·51	3	5	0·26	0·42	0·06	0·12
No Occupation	–	2	–	*	–	5	–	*	–	–
Cardroom Hands	1	–	7·25	–	–	1	–	1·05	7·35	3·16
Confectioners	1	–	5·58	–	–	–	–	–	No deaths in 1925.	
Machinists	–	1	–	2·89	–	2	–	5·98		
Cabinet Makers..	2	–	20·00	–	–	–	–	–		
Joiners	1	–	1·88	–	1	–	1·88	–	1·88	–
Moulders	1	–	1·68	–	–	–	–	–	3·35	–
Caretakers	1	–	7·93	–	–	–	–	–	No deaths or notifications in 1925.	
Upholsterers	1	–	16·40	–	–	–	–	–		
Plumbers	1	–	5·05	–	1	–	5·05	–		
Wood Sawyers	1	–	12·04	–	1	–	12·04	–		
Railway Engine Drivers	1	–	4·13	–	1	–	4·13	–		
Waitress	–	1	–	18·18	–	–	–	–		
Billposters	1	–	*	–	–	–	–	–		
Goods Porters	1	–	3·60	–	–	–	–	–		
Flaggers and Slaters	1	–	37·03	–	–	–	–	–		
Heald Knitters	–	1	–	4·20	1	1	35·71	4·20		
Ship's Cooks	1	–	*	–	1	–	*	–		
Coal Miners	–	–	–	–	2	–	7·13	–		
Fruiterers	–	–	–	–	2	–	1·62	–		
Shuttle Makers	1	–	*	–	–	–	–	–		
Hairdressers	–	1	–	90·90	–	–	–	–		
Students	–	–	–	–	1	–	33·33	–		
Iron and Steel Merchants ..	–	–	–	–	1	–	3·71	–		

*Separate headings under these designations not given in Census Returns.

Deaths from Pulmonary Tuberculosis occurred in members of the following occupations in 1925, but not in 1926, *viz.*, Dressmakers (2F), Insurance Agent (1 M), Shoemaker (1 M), Shop-keepers (2 M, 1 F), Butcher (1 M), Stoker (1 M), Forrestry Officer (1 M), Machine Maker (1 M), Blacksmith (1 M), Pattern Maker (1 M).

Notifications of Pulmonary Tuberculosis occurred in members of the following occupations in 1925, but not in 1926 : Dressmakers (3 F), Stonemason (1 M), Insurance Agents (2 M), Shoemaker (1 M), Shop-keepers (1 M and 1 F), Packer (1 M), Butcher (1 M), School Teacher (1 F), Blind Maker (1 F), Hall Attendant (1 M).

SLEEPING ACCOMMODATION OF NOTIFIED CASES OF PULMONARY TUBERCULOSIS.

The following Table gives particulars of the isolation, or lack of it, of patients suffering from Pulmonary Tuberculosis at the time of notification, and after visitation by the Tuberculosis Officer or Nurse.

The figures relate to patients who were at home during the last quarter of 1926.

TABLE 41.

	On First Visit.	Afterwards.
No. who occupy a separate bedroom	106	122
No. who occupy a separate parlour alone	4	5
No. who occupied a kitchen alone	6	8
No. who occupied a shelter in yard	..	..
No. who occupied a separate bed in a room occupied by :—		
One other person	24	33
Two other persons	17	17
Three other persons	2	1
Many other persons (Common Lodging House, &c.) ..	2	2
No. who occupied a bed in common with :—		
One other person	130	101
Two other persons	13	17
Three other persons	..	..
Two beds in a room :—		
Two persons in each bed	21	19
Three persons in each bed	2	2
TOTAL	327	327

Whenever it is physically possible, it should be a *sine qua non* that a case of Pulmonary Tuberculosis should sleep alone, and preferably in a room alone. It is of advantage to the patient, and it is also a safeguard against other members of the household receiving that massive dose of infection which may determine the swing of the balance between health and sickness.

HOME VISITING OF TUBERCULOSIS PATIENTS.

The number of visits paid shows a slight falling off, from 3,804 in 1925, to 3,243 in the year under review. Some of this deficiency is explained by the Tuberculosis Nurse being incapacitated by illness.

TABLE 42.

	EX-SERVICE MEN		OTHERS.		TOTAL.
	Pul.	Non-Pul.	Pul	Non-Pul.	
No. of Visits to New Cases ..	12	3	163	71	249
No. of Visits to patients on Domiciliary Treatment .	323	66	868	360	1717
No. of Visits to Patients on Dispensary Treatment ..	173	117	349	270	909
No. of Patients in Sanatoria ..	1	..	21	4	26
No. of Visits for Contact Search	..	..	314	1	315
No. of Visits to Cases Died ..	..	..	20	1	21
No. of Visits to Cases Removed from Borough	..	..	5	1	6
TOTAL	509	286	1740	708	3243

TABLE 43.

Public Health (Tuberculosis) Regulations, 1912.

SUMMARY OF NOTIFICATIONS.

Age Periods.	Notifications on Form A.													Notifications on Form B					Number of Notifications on Form C.	
	Number of Primary Notifications												Total Notifications on Form A.	Number of Primary Notifications.				Total Notifications on Form B.	Poor Law Institutions.	Sanatoria.
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards	Total Primary Notifications		Under 5	5 to 10	10 to 15	Total Primary Notifications			
Pulmonary Males ..	..	..	4	1	14	8	15	12	7	4	1	66	68	..	1	2	3	3	8	52
,, Females...	..	1	3	2	4	18	20	8	4	3	..	63	68	..	..	..	..	..	1	38
Non-Pulmonary Males	1	3	4	3	3	1	..	1	1	..	..	17	23	..	3	1	4	4	2	2
,, ,, Females	..	..	4	3	..	4	2	1	2	..	..	16	22	..	4	3	7	7	3	1

New cases of Tuberculosis coming to the knowledge of the Medical Officer of Health or Chief (Administrative) Tuberculosis Officer during the period from the 3rd January, 1926, to the 1st January, 1927, otherwise than by notification, on Form A or Form B, under the Public Health (Tuberculosis) Regulations, 1912.

Age Periods	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards	Total Cases.
Pulmonary Males	1	1	–	1	–	1	2	–	3	4	–	13
Pulmonary Females	–	–	–	–	1	3	–	1	–	2	–	7
Non-Pulmonary Males	2	–	1	–	1	–	–	1	–	–	–	5
Non-Pulmonary Females ...	–	2	–	–	1	–	2	–	–	–	–	5

Public Health (Tuberculosis) Regulations, 1924.

Number of cases of Tuberculosis remaining on the Registers of Notifications kept by the Medical Officer of Health of the County Borough on the 31st December, 1926.

Total Cases.	Pulmonary.			Non-Pulmonary.		
	Males	Females	Total.	Males	Females	Total
902	328	261	589	152	161	313

TABLE 44.

TUBERCULOSIS DISPENSARY—WORK CARRIED OUT DURING THE YEAR 1926.

DIAGNOSIS.	PULMONARY.				NON-PULMONARY				TOTAL.			
	Adults		Children		Adults		Children		Adults		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.—New Cases examined during the year (excluding contacts)—												
(a) Definitely tuberculous ..	34	37	5	4	7	7	15	15	41	44	20	19
(b) Doubtfully tuberculous.	–	–	–	–	–	–	–	–	15	20	3	6
(c) Non-tuberculous	–	–	–	–	–	–	–	–	25	16	5	5
B.—Contacts examined during the year—												
(a) Definitely tuberculous ..	1	–	1	–	–	–	–	1	1	–	1	1
(b) Doubtfully tuberculous.	–	–	–	–	–	–	–	–	1	1	2	2
(c) Non-tuberculous	–	–	–	–	–	–	–	–	7	5	5	11
C.—Cases written off the Dispensary Register as—												
(a) Cured	–	–	–	–	–	–	–	–	–	–	–	–
(b) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error)..	–	–	–	–	–	–	–	–	39	27	13	19
D.—Number of Persons on Dispensary Register on December 31st—												
(a) Diagnosis completed ..	211	165	42	37	33	42	56	52	244	207	98	89
(b) Diagnosis not completed	–	–	–	–	–	–	–	–	8	7	3	3

1. Number of persons on Dispensary Register on January 1st 609

2. Number of Patients transferred from other areas and of "lost sight of" cases returned 19

3. Number of Patients transferred to other areas and cases "lost sight of" .. 64

4. Died during the year.. 63

5. Number of Observation Cases under A (b) and B (b) above in which period of observation exceeded two months 3

6. Number of Attendances at the Dispensary (including Contacts).. 2939

7. Number of Attendances of Non-Pulmonary Cases at Orthopædic Out-stations for treatment or supervision 33

8.	Number of Attendances, at General Hospitals or other Institutions approved for the purpose, of Patients for—	
	(*a*) " Light " treatment	2696
	(*b*) Other special forms of treatment	31
9.	Number of Patients to whom Dental Treatment was given, at or in connection with the Dispensary	1
10.	Number of Consultations with Medical Practitioners :—	
	(*a*) At Homes of Applicants	5
	(*b*) Otherwise	184
11.	Number of other Visits by Tuberculosis Officers to Homes	147
12.	Number of Visits by Nurses or Health Visitors to Homes for Dispensary purposes	3243
13.	Number of :—	
	(*a*) Specimens of Sputum, &c., examined	176
	(*b*) X-Ray Examinations made in connection with Dispensary work	208
14.	Number of Insured Persons on Dispensary Register on the 31st December	377
15.	Number of Insured Persons under Domiciliary Treatment on the 31st December	143
16.	Number of Reports received during the year in respect of Insured Persons :—	
	(*a*) Form G.P. 17	—
	(*b*) Form G.P. 36	47
17.	Number of cases sent by Private Practitioners for an opinion	136
18.	Number found to be suffering from Tuberculosis	62

TABLE 45.

RESULT OF TREATMENT.

Classification on admission to the Institution		Condition at time of Discharge.	Duration of Residential Treatment in the Institution. Under 3 months.			3–6 months.			6–12 months			More than 12 months.			To'l
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
PULMONARY TUBERCULOSIS.	Class T.B. minus.	Quiescent	..	1	..	2	4	..	..	1	..	..	..	..	8
		Improved	6	6	4	4	3	2	1	1	4	..	1	1	33
		No material improvement	4	1	1	1	..	1	..	..	..	..	..	..	8
		Died in Institution ..	..	..	1	..	..	..	..	..	..	..	..	..	1
	Class T.B. plus. Group 1.	Quiescent	..	..	..	2	..	..	..	..	..	..	..	..	2
		Improved	..	2	..	1	..	..	2	1	..	..	..	..	6
		No material improvement	..	2	..	1	..	..	..	..	..	..	..	..	3
		Died in Institution ..	1	..	..	1	..	..	..	..	..	..	1	..	3
	Class T.B. plus. Group 2.	Quiescent	..	..	..	..	..	..	..	..	..	..	..	..	..
		Improved	3	..	..	2	2	..	1	3	..	..	..	..	11
		No material improvement	..	..	..	1	..	..	..	1	..	..	..	..	2
		Died in Institution .	2	2	..	..	..	..	..	1	1	..	..	..	6
	Class T.B. plus. Group 3.	Quiescent	..	..	..	..	..	..	..	..	..	..	..	..	..
		Improved	1	1	..	1	..	..	1	..	..	..	1	..	5
		No material improvement	3	3	..	..	1	..	1	1	..	..	..	..	9
		Died in Institution ..	4	1	2	2	2	..	..	..	..	1	1	..	13
NON-PULMONARY TUBERCULOSIS.	Bones and Joints.	Quiescent or Arrested.	..	..	..	..	..	..	..	..	..	..	..	..	..
		Improved	..	..	..	..	..	..	..	..	..	..	..	..	..
		No material improvement	..	1	..	..	..	..	..	..	..	..	..	..	1
		Died in Institution ..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Abdominal	Quiescent or Arrested.	..	..	..	..	..	..	..	..	..	..	..	..	..
		Improved	..	..	..	..	1	2	..	..	..	..	..	1	4
		No material improvement	..	..	2	..	..	..	..	..	..	..	..	..	2
		Died in Institution ..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other Organs.	Quiescent or Arrested.	..	..	..	..	..	..	..	..	..	..	..	..	..
		Improved	..	..	..	..	..	..	..	..	..	..	..	..	..
		No material improvement	..	..	..	..	..	..	..	..	..	..	..	..	..
		Died in Institution ..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Peripheral Glands.	Quiescent or Arrested.	..	..	..	..	..	..	..	..	..	..	..	..	..
		Improved	..	..	..	..	..	1	..	..	..	..	..	1	2
		No material improvement	..	..	1	..	..	..	..	..	..	..	..	..	1
		Died in Institution ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Observation for purpose of Diagnosis			Under 1 week			1—2 weeks			2—4 weeks			More than 4 weeks			
		Tuberculous	..	..	..	..	..	..	..	..	..	..	..	2 *1	3
		Non-Tuberculous ..	..	..	..	..	..	..	..	..	..	..	..	*19	19
		Doubtful	1	..	..	..	..	..	..	..	..	..	..	..	1

* Patients in Residential Open Air School—Pre-Tubercular.

TABLE 46.

RESIDENTIAL INSTITUTIONS.

(A) Average Number of Beds Available for Patients During the Year 1926.

	Observation.	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Total
		"Sanaorium" Beds	"Hospital" Beds	Disease of Bones and Joints	Other Conditions.	
Adult Males..	..	5	18	6	..	29
Adult Females	..	4	16	6	..	26
Children under 15	20	..	..	6	..	26
Total	20	9	34	18	..	81

(B) Return Showing the Extent of Residential Treatment During the Year 1926.

			In Institutions on Jan. 1st	Admitt'd during the year	Discharged during the year	Died in the Institutions	In Institutions on Dec. 31st.
Number of Patients	Adults	M.	21	49	38	11	21
		F.	17	45	38	8	16
	Children	M.	6	16	16	1	5
		F.	6	6	5	3	4
Number of Observation Cases.	Adults	M.	..	1	1	..	..
		F.	..	..	..	..	..
	Children	M.	.. *3	2 *11	1 *6	.. ..	1 *8
		F.	.. *9	2 *7	1 *14	.. ..	1 *2

*Patients in Residential Open-Air School: Pre-Tubercular.

TABLE 47.

PULMONARY TUBERCULOSIS.

Condition at the time of the last record made during the year to which the Return relates.				Previous to 1926.					1926.				
				Class T.B. minus	Class T.B. plus. Group 1	Group 2	Group 3	Total (Class T.B. plus)	Class T.B. minus	Class T.B. plus. Group 1	Group 2	Group 3	Total (Class T.B. plus)
ALIVE	Discharged as Cured	Adults	M.	..	..	..	..	..	..	..	..	..	..
			F.	..	..	..	..	..	..	..	..	..	..
		Children	M.	..	..	..	..	..	..	..	..	..	..
			F.	..	..	..	..	..	..	..	..	..	..
	Disease Arrested	Adults	M.	20	3	..	..	3	..	..	..	..	..
			F.	16	1	..	..	1	..	..	..	..	..
		Children	M.	6	..	..	..	..	..	..	..	..	..
			F.	5	..	..	..	..	..	..	..	..	..
	Disease not Arrested	Adults	M.	62	20	23	18	61	23	4	2	4	10
			F.	45	15	22	19	56	22	6	3	1	10
		Children	M.	32	2	1	1	4	7	..	..	..	..
			F.	24	1	..	1	2	3	..	1	..	1
CONDITION NOT ASCERTAINED DURING THE YEAR				30	6	6	..	12	..	..	..	..	..
LOST SIGHT OF OR OTHERWISE REMOVED FROM DISPENSARY REGISTER				379	66	28	4	98	1	..	..	1	1
DEAD		Adults	M.	16	19	50	181	250	1	..	6	..	6
			F.	15	21	52	125	198	2	..	4	2	6
		Child-ren	M.	14	4	14	21	39	..	..	..	..	..
			F.	9	3	13	16	32	1	..	..	..	..
TOTALS				673	161	209	386	756	60	10	16	8	34

TABLE 47—*Continued*

NON-PULMONARY TUBERCULOSIS.

Condition at the time of the last record made during the year to which the Return relates.				Previous to 1926.					1926.				
				Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.
ALIVE	Discharged as Cured	Adults.	M.	..	..	..	..	..	..	..	..	..	..
			F.	..	..	..	..	..	..	..	..	..	..
		Children	M.	..	..	..	..	..	..	..	..	..	..
			F.	..	..	..	..	..	..	..	..	..	..
	Disease Arrested	Adults.	M.	..	..	..	..	..	..	..	..	..	..
			F.	..	..	..	1	1	..	..	..	..	..
		Children	M.	..	..	..	2	2	..	..	..	..	..
			F.	1	..	..	1	2	..	..	..	..	..
	Disease not Arrested ..	Adults.	M.	6	1	1	3	11	2	..	2	3	7
			F.	4	1	5	2	12	1	1	..	5	7
		Children.	M.	2	3	3	17	25	4	6	1	4	15
			F.	1	4	1	18	24	1	5	2	8	16
TRANSFERRED TO PULMONARY..				..	..	..	2	2	..	..	..	..	..
CONDITION NOT ASCERTAINED DURING THE YEAR				17	5	8	31	61	..	..	..	..	..
LOST SIGHT OF OR OTHERWISE REMOVED FROM DISPENSARY REGISTER				37	23	33	157	250	..	..	..	..	..
DEAD		Adults.	M.	17	14	6	3	40	..	..	..	..	..
			F.	13	14	9	..	36	..	..	..	..	..
		Children.	M.	10	15	14	3	42	..	..	..	..	..
			F.	7	16	11	2	36	..	..	..	..	..
TOTALS				115	96	91	242	544	8	12	5	20	45

CO-ORDINATION WITH MEDICAL PRACTITIONERS AND OTHER BRANCHES OF THE HEALTH DEPARTMENT.

During the year 136 suspected cases of Consumption were referred by private medical practitioners for the Tuberculosis Officer's opinion ; 62 were diagnosed as suffering from Pulmonary Tuberculosis, and were subsequently notified. 63% of all notified cases were sent for examination to the Dispensary, or were seen on the request of the Medical Attendant at the patient's home, prior to notification. In 1925 the percentage was 32%.

With all cases notified, contacts of the case are urged to attend the Clinic for examination. A small proportion avail themselves of this facility, but many are working and will not lose work for this purpose.

If it was possible to arrange home examinations of contacts, more cases would be reached. This is not practicable with the present Tuberculosis staff, but the co-operation of private medical men in this branch of work would be very valuable.

Thirty-seven contacts were examined in 1926, and of these 3 were found to be suffering from Tuberculosis, and 6 were suspected to be so suffering, but were kept under observation pending a decision.

In addition to the contacts examined by the Tuberculosis Officer at the Clinic, 182 were examined in Schools by the Medical Inspector. There were 271 known contacts on the books of the School Medical Service at the beginning of the year, and 54 new contacts were added during the year, the total at the end of 1926 being 285. The supervision of contacts of school age is close.

The medical practitioners have been helpful in sending cases on Domiciliary Treatment to the Dispensary for periodic examination. Each quarter a notice is sent to the panel practitioner having a domiciliary case, asking him either to send the case to the Dispensary or to send in a report of an examination made by him. Practitioners prefer to send the patient whenever this is possible, and it is certainly the better method from the Tuberculosis Officer's point of view. It is more satisfactory to see and examine a patient than to receive written reports about him without effecting personal contact.

Close co-operation has been maintained with the departments of the Public Health Services, each section sending cases for an opinion as the need arose.

A Clinical examination is made at the first visit of a patient to the Dispensary. This is followed by an X-Ray examination—screening and film—and a sputum test, if the patient is expectorating. Tuberculin injections or other uses of Tuberculin have not been used as, in ambulant cases especially, the method is not without danger. There exists also a deep-rooted suspicion in many persons, of the hypodermic needle. It is unwise to scare a patient with diagnostic procedures. The aim is rather to put him at ease so that he may more readily comply with subsequent advice.

General Observations Upon the Results of Treatment.

The most depressing feature of all Tuberculosis work, and especially so with Pulmonary Tuberculosis, is the inability of patients to realise fully the prolonged nature of the disease. Rapid cures are expected, such as happen in the acute disorders. Pulmonary Tuberculosis is a stealthy disease. In the majority of instances, insidious in onset, producing ravages without causing pronounced bodily disturbance, and only making itself felt when more or less extensive and permanent damage has been caused to the lungs.

The lungs are one of the body tissues which are not renewed if damaged. Once damaged they remain damaged. The process of arrest of Tuberculosis is merely stopping further damage, the past damage remains as scars in the lung tissue. The arrest of Pulmonary Tuberculosis is a slow process. The treatment should extend into years, not merely weeks or months. For years the disease has been at work, and it requires a similar period of time to stop its activities. The greatest factors making for success in treatment are patience on the part of the sufferer, and wise encouragement on the part of his medical adviser. If these two essentials are wanting then treatment ultimately proves a failure. All sufferers from this disease should realise that for the rest of their lives they have to remember to walk circumspectly. That no longer can they, with impunity, do all the normal healthy individual does, and that any errors of judgment or lack of discretion on their part, is apt to be visited by a retribution far more severe than in the case of a healthy man.

No Tuberculous patient should lead a life of idleness, but occupation should be suited to the needs of the case. It is in this respect that the present system of sickness benefits deals unfairly with the Tubercular patient. A mild occupation often does nothing but good, but the Tubercular patient is not in a position to compete with healthy labour. Some subsidy is required to enable him to enjoy a living wage. This subsidy could well be the present disablement benefit ; but a condition of the reception of this benefit is that the recipient does no work of any kind. As Tuberculosis is a long drawn out affair, this rule condemns the consumptive to months or years of idleness. This is neither good for his health nor his self-respect. It is an encouragement to pauperism and spineless dependency.

There is a great need in this work for adequate After-Care. Unfortunately, in Blackburn, apart from the window-cleaning business managed by the Charity Organisation Society for ex-Sanatorium patients, there is no system of After-Care. Cases not infrequently do well in Sanatoria, but relapse on their return to their old surroundings.

The public do not realise, in spite of propaganda, that the careful consumptive who has undergone a period of Sanatorium routine, is not a menace to the community. It is the individual who has learnt none of those precautions necessary, or is too careless or indolent to follow advice that helps in maintaining this scourge. The careful consumptive is not a menace to his fellow men ; the real danger is in the undiscovered cases and those who are careless. If every Consumptive was discovered, and of these everyone was imbued with a sanitary conscience, in a generation Consumption would dwindle and become one of the rare diseases. Typhoid Fever and Malaria have been controlled mainly by mechanical means, and little reliance has had to be placed on human nature. With consumption the chief reliance has to be placed on the individual, and the frailty of human nature is reflected in the comparatively slow advance made in stamping out this scourge.

The treatment of cases in the Corporation Hospital has been carried out on orthodox lines. Artificial Pneumothorax is utilised when indicated, but the type of case for which this treatment might prove beneficial is not often seen at the Hospital. Artificial Sunlight treatment is given in selected cases, and has proved beneficial. Tuberculin treatment has not been used. Graduated work and exercise has been given, together with the recognised dietetical measures. It is hoped to extend the graduated work and exercise in 1927. Aimless walking along prescribed paths day after day, with lengthy intervals of idleness, does not conduce to the healthy mind so necessary in these cases. To relieve this, the patients are allowed out of the Hospital grounds one hour a day for a walk, conditional, of course, upon the decision of the Medical Officer, as to their fitness. I am gratified to find that this privilege has not, as yet, been abused. A clock-golf green has been laid down, and a bowling green is in process of construction for the patients' recreation.

The arrangements provided at the Corporation Hospital for Tuberculous patients are capable of considerable improvement. There is no dining hall or recreation room, all the meals being taken in the ward. If the weather is wet, patients spend all their time in the ward in which they sleep. When games are played or discussions indulged in, patients seriously ill are consequently liable to be disturbed. A Hospital Ward is constructed for a specific purpose, namely, the care and nursing of the sick ; it is not meant to be used either as a dining room, or as a recreation room.

The erection of a separate dining and recreation room is an extension urgently needed. During 1927 it is intended to re-roof and widen the verandahs so that patients can sleep out of doors in all but the most inclement weather.

The Wireless Installation has been in use the whole year, and has been much appreciated, each bed in the male and female wards having a pair of ear-phones wired to it. The B.B.C. through the kind offices of Mr. Councillor Stanworth, gave £30 for a wireless set for use in the Residential Open Air School. This set—a three-valve—was made by the boys of Bangor Street School, under the superintendence of Mr. Caithness and Mr Clarke, both of whom took great interest in its installation and maintenance The gramophone has also rendered useful service, whilst the small billiard table in the men's ward has never been unused during recreation hours. The life of a Consumptive patient in hospital is, of necessity, a monotonous one, and the outlook is ofttimes dreary. Gifts of books (novels), gramophone records, cabinets of games, —not card games—and similar articles, are always welcome.

Under special arrangements with the Corporation, the District Nurses attend cases of Pulmonary and Non-Pulmonary Tuberculosis in their homes, and render nursing assistance. There is no scheme, administered by the Corporation, for the provision of extra nourishment, but necessitous cases are given a pint of milk (Grade A) and two eggs daily on the representation of the M.O.H., and with the approval of the Health Committee. The Tuberculosis Regulations allow for this purpose the spending of an amount not exceeding £2 per 1,000 of the population.

The School Dentist—Miss E. Thomson—devotes some of her time to Tubercular patients. She carried out the following work in 1926 :—

Number of Patients..	16
Permanent Teeth extracted	55
Temporary Teeth extracted	1
Scaling and Polishing	7
Number of Sessions held	8

The following treatment was carried out at Meathop Sanatorium by the Dental Surgeon attached to that Institution. The cost of this treatment was borne by the Health Committee, but in some cases a part of the expense was refunded by the patients :—

Number of Patients treated	14
Extractions	65
Number of Teeth filled	1
Number of Scalings	1
Dentures supplied :—	
Full Sets	4
Part Sets	4

Combined Treatment and Training. One case was transferred during the year from the Preston Hall Colony to the Corporation Hospital at his own wish. He was a very advanced case, and ultimately died in the Hospital.

X-Rays. All cases of Pulmonary and Non-Pulmonary Tuberculosis, in whom the diagnosis is not absolutely apparent, are subject to a thorough X-Ray examination. This is carried out at the Corporation Hospital. The number of such examinations in 1926 was :—

	Private Practitioner	Tuberculosis Officer
LUNGS :		
Films	32	280
Screenings	24	282
BONES AND JOINTS :		
Films	37	20
Screenings	26	18
	119	600

THE TREATMENT OF TUBERCULOSIS.

At the beginning of 1926 there were 505 Pulmonary and 264 Non-Pulmonary Tuberculosis cases on the Dispensary Register. During the year the new notifications numbered 132 Pulmonary and 44 Non-Pulmonary ; and 6 Pulmonary and 9 Non-Pulmonary cases who had been crossed off the Register in previous years, returned during the year ; therefore, 643 Pulmonary and 317 Non-Pulmonary cases were dealt with. Of this number 111 Pulmonary and 12 Non-Pulmonary patients' names were removed from the Register for one cause or another, the great bulk being those who had never attended the Clinic.

At the end of the year there were, consequently, 532 Pulmonary and 305 Non-Pulmonary cases on the Register. One hundred and forty-three of these were on Domiciliary Treatment, 203 on Dispensary Treatment, 145 on Dispensary Observation. The large figure of 182 were receiving no treatment. These are cases who are unwilling to place themselves under medical supervision, because they do not feel ill, and in the majority of instances are capable of following their occupations. This is an unwise attitude to adopt for the beginnings of Tuberculosis are as insidious as the end is certain, when once an advanced stage is reached. Tuberculosis is curable if taken early and treated seriously. It is incurable in the more advanced stages.

Particulars relating to the 16 cases who were discontinued as apparently cured are given in Table 49. There are some instructive facts to be deducted therefrom. Twelve of the cases were classified as early, *i.e.*, 75% of the total ; 19% as Intermediate ; and 6% as Advanced. These percentages may be taken as indicating, fairly accurately, the proportional chances of cure in the three stages. Eight cases had received Institutional treatment (50%).

Looking at the dates when notification was received, it may be noted that in the Pulmonary cases 1 had been notified 12 years ; 1, 11 years ; 1, 9 years ; 1, 8 years ; 3, 5 years ; 1, 4 years ; and 2, 3 years. The period between notification and apparent cure is shorter for the Non-Pulmonary than for the Pulmonary cases.

In 6 instances (37·5%) the original diagnosis was doubtful.

THE TUBERCULOSIS CLINIC.

The following Tables give the number of cases dealt with in 1926 :—

TABLE 48.

TUBERCULOSIS DISPENSARY SYSTEM.

	Pulmonary.	*Non-Pulmonary.*
Cases from 1925	505	264
New Notifications in 1926	132	44
Lost sight of, Cases Returned and Transferred from other Areas	6	9
Total dealt with during 1926..	643	317

	Pulmonary.	*Non-Pulmonary.*
No. died of Tuberculosis	83	5
No. lost sight of	4	..
No. died (death certified not T.)	6	1
No. removed to other towns	7	1
No. discontinued apparently cured	11	5
	111	12

NUMBER UNDER SUPERVISION, DECEMBER, 1926.

		Pulmonary.	*Non-Pulmonary.*
1.	Domiciliary Treatment	122	21
2.	Dispensary Treatment	156	47
3.	Dispensary Observation	90	55
4.	Meathop Sanatorium	9	.
5.	Corporation Hospital	31	2
6.	Poor Law Institution	20	31
7.	Private Doctor	30	27
8.	No Treatment	66	116
9.	Residential Open Air School	3	3
10.	Other Institutions	5	3
		532	305
	TOTAL	643	317

TABLE 49.

PARTICULARS OF CASES DISCONTINUED DURING 1926.

	Male.	*Female.*	*Total.*
Pulmonary	9	2	11
Non-Pulmonary	4	1	5

YEARS WHEN DISCONTINUED PULMONARY CASES WERE NOTIFIED :—

1914		1915		1917		1918		1919		1921		1922		1923	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1	..	..	1	1	..	1	..	1	..	3	..	1	..	1	1

YEARS WHEN DISCONTINUED NON-PULMONARY CASES WERE NOTIFIED :—

1920		1921		1924		1926	
M.	F.	M.	F.	M.	F.	M.	F.
1	..	..	1	1	..	2	..

CASES IN WHICH ORIGINAL DIAGNOSIS WAS DOUBTFUL :—

	Male.	*Female.*	*Total.*
Pulmonary	5	..	5
Non-Pulmonary	1	..	1

No. OF CASES WHICH HAD RECEIVED INSTITUTIONAL TREATMENT :—

	Male.	*Female.*	*Total.*
Pulmonary	7	..	7
Non-Pulmonary	1	..	1

STAGE OF DISEASE WHEN NOTIFIED :—

	Early.		Intermediate.		Advanced.	
	M.	F.	M.	F.	M.	F.
Pulmonary	7	1	2	..	..	1
Non-Pulmonary	4	..	..	1	..	..
TOTAL	11	1	2	1	..	1

Criterion of Cure.	Pulmonary.			Non-Pulmonary.		
	M.	F.	Total.	M.	F.	Total.
No evidence of active disease during whole time under observation at Dispensary ..	5	1	6	1	..	1
No signs of active disease for 1—4 years	4	1	5	3	1	4
No signs of active disease for 5 years or more	..	..	..	..	.	..
TOTAL	9	2	11	4	1	5

THE RESULTS OF SANATORIUM TREATMENT.

Patients from Blackburn are sent either to Meathop Sanatorium, Grange-over-Sands, in which Institution the Blackburn Corporation reserves nine beds, or to the Corporation Hospital. Early cases, or cases who have progressed favourably in the Corporation Hospital, are sent to the former Institution; more advanced cases are drafted to the latter. It is a mistake, however, to imagine that the Corporation Hospital Wards are merely "Homes for the dying." It is not seldom that we are compelled to refuse requests from medical practitioners for the admittance of cases which, upon examination, are found to be quite hopeless. This decision is based on two points. Firstly, the admission of a patient who is obviously beyond all hope, has a detrimental effect upon patients in the Institution; and secondly, it is held to be somewhat hard-hearted to remove such a patient from his home surroundings, where the vast majority prefer to die, when his removal will do no good in any way. When a patient has only a few days to live, any damage he is capable of doing, by spreading infection, has already been done. It is unfortunate that so many patients first come under the Tuberculosis Scheme in an advanced stage of the illness when measures can merely be palliative, all prospects of arrest having long passed.

During 1926, 14 males and 12 females were admitted to Meathop; 5 males and 4 females were inpatients at the commencement of the year, and a similar number remained at the end of the year. Of the patients discharged, 4 males and 4 females had the disease arrested; 8 males and 5 females were much improved; and in 2 males and 3 females there was no improvement. There were no deaths.

Thirty-six males, 31 females, and 12 children were admitted to the Corporation Hospital Open Air Wards. In addition, 19 boys and 11 girls were admitted to the Residential Open Air School. At the commencement of the year, 15 males, 13 females, and 2 children were in residence in the Open Air Ward; 20 children in the School. At the end of the year, 16 males, 12 females, and 3 children remained in the Open Air Ward; 16 children in the School. Of the patients discharged, 2 females had the disease arrested; 15 males, 16 females, and 4 children were much improved; 8 males, 6 females, and 1 child showed no improvement, and 11 males, 8 females, and 4 children died.

Looking more closely at the figures for the Corporation Hospital, of the 78 patients discharged during the year, 34·6% were early cases, 15·4% moderately early, 19·2% moderately advanced, 27·0% advanced, and 3·8% were cases for observation. Among the 23 deaths, 1 (4·5%) occurred in a child in the early group, from concurrent pneumonia ; 3 (13%) occurred in the moderately early group ; 6 (26%) in the moderately advanced group ; and 13 (56·5%) in the advanced group ; 56·5% of the deaths occurred in patients who had been resident in the Institution less than three months ; 21·7% in those resident less than six months ; 8·7% in those resident less than twelve months, and 13% in residents of over twelve months.

Tables 53 and 54 are interesting, as showing the present conditions of patients treated in the two institutions at the end of a period of years. So far as the Corporation Hospital is concerned, 52·2% of a total of 1,091 patients treated since 1913, were dead at the end of 1926. For Meathop the figure is 43·2%. A complicating factor arises in the consideration of these figures, in as much as a patient may have been treated in Meathop in one year and admitted to the Corporation Hospital, with the disease more advanced, in a later year. The figures for patients at work at the end of 1926 were 18·6% for the Corporation Hospital, and 25·8% for Meathop. Considering the disparity in the types of cases treated at the respective institutions, the figures for the former are satisfactory.

From whatever point of view these figures are studied, it must be confessed that the end results of Sanatorium treatment as at present carried out, are disappointing. These discouraging results are chiefly due to patients not coming under treatment early enough.

TABLE 50.

SHOWING THE EXTENT OF RESIDENTIAL TREATMENT FOR PULMONARY TUBERCULOSIS DURING 1926.

			In Institutions on Jan. 1st.	Admitted during 1926.	Discharged during 1926.	Died in the Institutions.	In Institutions on Dec. 31st, 1926.
Meathop Sanatorium	Adults	M.	5	14	14	—	5
		F.	4	12	12	—	4
	Children	M.	—	—	—	—	—
		F.	—	—	—	—	—
Corporation Hospital.	Adults	M.	15	36	24	11	16
		F.	13	31	24	8	12
	Children	M.	—	8	5	1	2
		F.	2	4	2	3	1
Residential Open-Air School. ..	Children	M.	8	19	16	—	11
		F.	12	11	18	—	5
TOTAL	... ...		59	135	115	23	56

TABLE 51.

TABLE SHOWING THE IMMEDIATE RESULTS OF TREATMENT OF PATIENTS DISCHARGED FROM THE BLACKBURN CORPORATION HOSPITAL DURING 1926.

	Condition at time of Discharge.	Pulmonary Tuberculosis.—Duration of Residential Treatment.												
		Under 3 months			3–6 months.			6–12 months			More than 12 months.			Total
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Class A. Cases in which Tubercle Bacilli have never been found	Quiescent	–	1	–	–	1	–	–	–	–	–	–	–	2
	Much improved	5	5	1	2	1	2	1	–	1	–	1	–	19
	No material improvement.	4	–	–	–	–	1	–	–	–	–	–	–	5
	Died in Institution ...	–	–	1	–	–	–	–	–	–	–	–	–	1
Class B 1 Early cases in which Tubercle Bacilli have been found	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
	Much improved	–	2	–	1	–	–	2	1	–	–	–	–	6
	No material improvement.	–	2	–	1	–	–	–	–	–	–	–	–	3
	Died in Institution ...	1	–	–	1	–	–	–	–	–	–	1	–	3
Class B 2 Intermediate Cases in which Tubercle Bacilli have been found ...	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
	Much improved	2	–	–	1	2	–	–	2	–	–	–	–	7
	No material improvement.	–	–	–	1	–	–	–	1	–	–	–	–	2
	Died in Institution ...	2	2	–	–	–	–	–	1	1	–	–	–	6
Class B 3 Advanced cases in which Tubercle Bacilli have been found	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
	Much improved	1	1	–	–	–	–	–	–	–	–	1	–	3
	No material improvement.	2	2	–	–	–	–	–	1	–	–	–	–	5
	Died in Institution ...	4	1	2	2	2	–	–	–	–	1	1	–	13
	Final Diagnosis ...	Under 1 week			1–2 weeks.			2–4 weeks.			More than 4 wks			
Observation for purposes of diagnosis	Tuberculous	–	–	–	–	–	–	–	–	–	–	–	2	2
	Non-Tuberculous... ...	–	–	–	–	–	–	–	–	–	–	–	–	–
	Doubtful	1	–	–	–	–	–	–	–	–	–	–	–	1
	Total	22	16	4	9	6	3	3	6	2	1	4	2	78

TABLE 52.

ANNUAL RETURN SHOWING THE IMMEDIATE RESULTS OF TREATMENT OF PATIENTS DISCHARGED FROM MEATHOP SANATORIUM DURING THE YEAR 1926.

	Condition at time of discharge.	Pulmonary Tuberculosis.—Duration of Residential Treatment.												
		Under 3 months			3–6 months.			6–12 months.			More than 12 months.			Total.
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
Class A Cases in which Tubercle Bacilli have never been found	Quiescent	–	–	–	2	3	–	–	1	–	–	–	–	6
	Much improved	1	1	–	2	2	–	–	1	–	–	–	–	7
	No material improvement.	–	1	–	1	–	–	–	–	–	–	–	–	2
	Died in Institution ...	–	–	–	–	–	–	–	–	–	–	–	–	–
Class B 1 Early Cases in which Tubercle Bacilli have been found	Quiescent	–	–	–	2	–	–	–	–	–	–	–	–	2
	Much improved	–	–	–	–	–	–	–	–	–	–	–	–	–
	No material improvement.	–	–	–	–	–	–	–	–	–	–	–	–	–
	Died in Institution ...	–	–	–	–	–	–	–	–	–	–	–	–	–
Class B 2 Intermediate Cases in which Tubercle Bacilli have been found ...	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
	Much improved	1	–	–	1	–	–	1	1	–	–	–	–	4
	No material improvement.	–	–	–	–	–	–	–	–	–	–	–	–	–
	Died in Institution ...	–	–	–	–	–	–	–	–	–	–	–	–	–
Class B 3 Advanced Cases in which Tubercle Bacilli have been found	Quiescent	–	–	–	–	–	–	–	–	–	–	–	–	–
	Much improved	–	–	–	1	–	–	1	–	–	–	–	–	2
	No material improvement.	1	1	–	–	1	–	–	–	–	–	–	–	3
	Died in Institution ...	–	–	–	–	–	–	–	–	–	–	–	–	–
	Total	3	3	–	9	6	–	2	3	–	–	–	–	26

TABLE 53.

CONDITION AT END OF 1926 OF PATIENTS TREATED AT AND DISCHARGED FROM THE BLACKBURN CORPORATION HOSPITAL.

Year Discharged	At full work. No Symptoms 1	At full work, but with difficulty 2	Not able to work full time owing to ill health. 3	Not able to work but able to get about 4	Confined to the house 5	Confined to bed 6	Died (not in the Institution at time of first admission). 7	Cannot trace 8	Total.
1913	15	1	3	—	1	—	42	29	91
1914	12	—	1	—	—	—	36	19	68
1915	5	—	—	—	—	1	58	9	73
1916	3	—	1	1	—	—	46	5	56
1917	6	—	1	—	1	—	29	1	38
1918	9	1	1	1	1	—	38	6	57
1919	17	3	2	4	—	1	43	3	73
1920	14	3	—	4	1	2	46	3	73
1921	14	5	2	9	—	1	44	2	77
1922	21	9	1	16	1	1	47	7	103
1923	23	8	10	16	6	—	54	6	123
1924	7	8	7	27	2	2	44	4	101
1925	—	17	6	36	4	3	34	3	103
1926	—	2	11	23	6	1	9	3	55
Total..	146	57	46	137	23	12	570	100	1091
%	13·4	5·2	4·2	12·6	2·1	1·1	52·2	9·2	—

TABLE 54.

CONDITION AT END OF 1926 OF PATIENTS TREATED AT AND DISCHARGED FROM MEATHOP SANATORIUM.

Year Discharged.	At full work. No Symptoms. 1	At full work, but with difficulty 2	Not able to work full time owing to ill health 3	Not able to work but able to get about 4	Confined to the house. 5	Confined to bed. 6	Dead 7	Cannot trace 8	Total.
1908	1	—	—	—	—	—	2	2	5
1909	—	—	—	—	—	—	10	5	15
1910	1	—	—	—	—	—	18	4	23
1911	—	—	—	2	—	—	14	1	17
1912	—	—	—	—	—	—	16	3	19
1913	9	—	1	—	1	—	13	12	36
1914	14	1	—	—	—	—	12	11	38
1915	6	—	—	—	—	—	14	12	32
1916	9	—	—	1	—	—	16	4	30
1917	9	—	—	3	—	—	19	5	36
1918	7	3	1	1	1	1	23	3	40
1919	13	3	1	5	1	—	18	7	48
1920	13	1	—	5	1	—	17	5	42
1921	15	4	2	6	2	—	9	4	42
1922	3	1	2	3	—	—	10	3	22
1923	2	6	1	4	—	—	7	4	24
1924	2	6	2	5	—	1	8	2	26
1925	—	6	2	7	—	—	9	1	25
1926	—	6	2	14	1	1	1	1	26
Total	104	37	14	56	7	3	236	89	546
%	19·0	6·8	2·6	10·3	1·3	0·5	43·2	16·3	—

TABLE 55.

SUMMARY OF DISPENSARY STATISTICS AND OF HOME VISITING.

	1926	1925
Number of persons placed under observation for purpose of diagnosis	50	71
Number of persons for whom the period of observation exceeded two months	3	19
Number of visits paid by the Tuberculosis Officer to the homes of patients	147	162
Number of visits paid by Nurses to the homes of patients for dispensary purposes	3243	3804
Number of attondances of patients at the Dispensary :—		
Insured	1863	1788
Not Insured	1076	734
Total	2939	2522
Number of patients under Domiciliary Treatment :—		
Pulmonary	122	127
Non-Pulmonary	21	54
Total	143	181
Number of reports received from practitioners in respect of patients on Domiciliary Treatment	47	16
Number of specimens of sputum examined in connection with the work of the Dispensary :—		
Positive	54	25
Negative	122	110
Total	176	135
Number of houses disinfected during the year :—		
(i) On removal of patient to Hospital ..	70	132
(ii) On death	69	65
(iii) On changing address..	8	3
Number of Reports made to Local War Pensions Committee by the Tuberculosis Officer on general progress and capacity for work of Tuberculous Discharged ex-Service men	178	152

TABLE 56.

AGES AT DEATH FROM PULMONARY TUBERCULOSIS, 1901—1926.

YEARS.	0–5 a	5–10 b	10–15 c	15–20 d	20–25 e	25–35 f	35–45 g	45–55 h	55–65 i	Over 65 j	Total
1901—1921	98	47	72	229	285	573	587	406	203	46	2546
1922	..	1	5	12	12	25	27	8	5	1	96
1923	1	2	4	9	11	15	20	18	10	3	93
1924	2	1	2	10	13	21	12	11	11	2	85
1925	..	..	3	16	10	24	14	13	7	3	90
1926	6	1	4	10	28	17	21	13	9	1	106
Grand Total 26 years..	103	52	90	286	359	675	681	469	245	56	3016

Perusal of the above Table shows that the average number of deaths in the first two periods given (*a* and *b*) is less in the last four years than in the 21 years previously. It remains practically unchanged in periods *c* and *d*. It shows a diminution in periods *e* and *f*; a considerable reduction in periods *g* and *h*, a slight reduction in period *i*, whilst in ages over 65 (period *j*) it remains unchanged. For the whole period of life the number of deaths have fallen from an average of 121 per annum, in 1901—1921, to 94, in 1922—1926. There is apparent, therefore, a steady reduction in recent years.

NON-PULMONARY TUBERCULOSIS.

During the year 10 deaths were certified to be due to Non-Pulmonary Tuberculosis, compared with 24 in 1925, 26 in 1924, 31 in 1923, and 26 in 1922. The deaths were due to :—

	Male.	*Female.*
Tuberculous Meningitis	2	..
Tuberculous Peritonitis	2	1
Spinal Caries	1	..
Tabes Mesenterica	1	..
Bone and Joint Tuberculosis..	2	1

Forty-four cases of Non-Pulmonary Tuberculosis were notified. The diagnoses were :—

	Male.	Female.
Tuberculous Glands of Neck	3	10
Abdominal Tuberculosis	7	5
Meningeal Tuberculosis	1	..
Spinal Caries	1	..
Tuberculous Joint Disease	2	4
Tuberculous Bone Disease	4	1
Lupus	2	3
General Miliary Tuberculosis..	1	..

The Blackburn Board of Guardians have enlarged their provision for these cases in the special annexe attached to their Queen's Park Hospital. The accommodation is very satisfactory.

Some cases are also operated on and treated at the Blackburn and East Lancashire Royal Infirmary, and at various Manchester and Liverpool hospitals.

Bone and Joint Tuberculosis.

Orthopœdic Clinic. I have given a full account of this Clinic in the School Medical Services Report for 1926. Dr. W. Briggs held 16 sessions ; 184 patients were examined. Of these 30 suffered from Tuberculous Bone or Joint disease. Twenty-eight X-Ray examinations were made on these patients.

VENEREAL DISEASES.

The scheme in operation in the Borough consists of (*a*) Clinics held at the Blackburn and East Lancashire Royal Infirmary, for men and for women. The males attend on Tuesday and Friday ; the women on Monday and Thursday. All the Clinics are held in the evenings, and are conducted on recognised lines. (*b*) A Special Clinic is held at the Town Hall on Tuesday mornings in connection with the Maternity and Child Welfare Department. The Medical Officer in charge of the Male Clinics is Dr. W. Cran Duthie, who is not otherwise connected with the Health Department. Dr. Ella Mackenzie is in charge of the Female Clinics and of the Special Clinic held at the Town Hall. Dr. Mackenzie is a whole-time officer of the Health Department. I am indebted to both Dr. Duthie and Dr. Mackenzie for the figures given in connection with this branch of work.

Blackburn and East Lancashire Royal Infirmary.

The Scheme at the Infirmary has remained unaltered since 1920, and is apparently quite capable of meeting all demands. The Special Town Hall

Clinic was commenced in 1922, for the purpose of enabling mothers to obtain treatment with even less publicity than was possible at the Infirmary.

At the beginning of the year there were 99 males and 89 females under treatment for Syphilis ; 93 males and 45 females being treated for Gonorrhœa ; 8 males and 8 females for conditions other than venereal, and 6 males for soft Chancre.

The following Table gives the number of new cases seen yearly at the Clinics held at the Blackburn Royal Infirmary, since 1920. These figures include patients attending from areas outside the County Borough.

Year.	*Male.*	*Female.*	*Total.*
1920	443	167	610
1921	334	191	525
1922	258	155	413
1923	264	154	418
1924	243	148	391
1925	225	131	356
1926	260	144	404

During the year 10 male and 8 female Venereal cases were admitted as in-patients to the Royal Infirmary. Five male and 1 female in-patients were suffering from Syphilis, 4 males and 5 females from Gonorrhœa, and 1 male and 2 females from both complaints. The aggregate number of in-patient days was for Syphilis : males, 44 days ; females, 79 days ; for Gonorrhœa : males, 61 days ; females, 200 days.

Of this aggregate of 384 days, 185 referred to Blackburn patients, and 199 to patients resident outside Blackburn ; 87 patients suffering from Gonorrhœa, 36 suffering from Syphilis, 2 from Soft Chancre, and 50 from conditions other than venereal, came to the Clinic from areas outside the Borough ; 51 cases of Syphilis, 89 of Gonorrhœa, 88 of conditions other than Venereal, and one case of Soft Chancre, attending the Clinic for the first time during 1926, lived in the Borough. Two Blackburn residents suffering from Gonorrhœa attended the Preston Royal Infirmary for the first time in 1926, and made 28 attendances.

The attendances at the Infirmary Clinics were : 9,924 for males, and 3,137 for females. These figures are divided up as follows :—3,811 attendances by the males for individual attention of the medical officer ; and 2,579 attendances of females for the same purpose. For intermediate treatment, such as irrigations, dressings, etc., the males made 6,113 attendances, and the females 558.

Blackburn patients made 9,139 attendances ; patients outside the Borough made 3,922 attendances ; a total number of attendances of 13,061.

The figures for irrigation in 1922 were, 1,930 ; 1923, 4,062 ; 1924, 5,371 ; 1925, 6,640 ; 1926, 6,671.

New cases during 1926 at all centres, including the attendance of Blackburn patients at Clinics outside the town and of out-Borough cases to Blackburn Clinics, numbered 260 male, and 337 female and children. The following Table shows the diagnoses made in respect of these patients :—

TABLE 57.

	B. & E. L. R. I.		Town Hall	Preston Royal Infirmary.
	Male.	Female.	Female or Children only.	
Syphilis	53	34	50	
Soft Chancre	3	..	..	..
Gonorrhœa..	122	54	61	2*
Conditions other than Venereal ..	82	56	82	..
	260	144	193	2

* Sex not Stated.

At the end of the year 108 males and 24 females were under treatment or observation at the Blackburn Royal Infirmary, for Syphilis ; 181 males and 77 females for Gonorrhœa ; 4 males and 2 females for conditions other than venereal ; and 7 males for Soft Chancre. It is seen, therefore, that there were 9 more males, and 65 fewer females under treatment for Syphilis at the end of 1926 than at the beginning ; 88 more males and 32 more females under treatment for Gonorrhœa. A far greater number of females ceased attending before treatment was completed than was the case with males ; particularly is this the case in those suffering from Syphilis. Twenty-two males and 16 females suffering from Syphilis were discharged during the year ; 41 males and 88 females suffering from Syphilis ceased attending before completion of cure. For Gonorrhœa the figures are : Males discharged, 31 ; females, 6 ; males who ceased attending before completion of treatment, 10 ; females, 18.

The total recorded attendances made by Blackburn residents attending for the first time, and not including subsequent attendances, at any Venereal Disease Clinic were 424, and in 170 the condition was found to be not Venereal. There were, therefore, 254 new cases of Venereal Disease in Blackburn who sought treatment at a recognised Centre, a reduction of seven on last year's figure. This figure must not be taken as any indication of the prevalence of these diseases in the Blackburn community. It is impossible to obtain any reliable statistics upon this point, but the trend of opinion is that Venereal Diseases are steadily declining. For many, the decline seems far too slow, and there are advocates of various prophylactic methods who think that these complaints could be greatly mitigated if certain measures were taken.

SPECIAL TREATMENT CENTRE FOR WOMEN AND CHILDREN AT THE TOWN HALL.

At the commencement of 1926, 18 males and 28 females were under treatment for Syphilis ; 35 females for Gonorrhœa ; and 2 males and 10 females for conditions other than Venereal ; a total of 20 males and 71 females.

At the end of the year 8 males and 29 females were under treatment for Syphilis ; 37 females for Gonorrhœa ; 4 females for conditions other than Venereal.

The number of new cases attending was : Syphilis, 17 males and 34 females ; Gonorrhœa, 2 males and 60 females ; conditions other than Venereal, 3 male and 79 female ; a total of 22 males and 173 females.

During the year Blackburn patients made 2,110 attendances, whilst two patients from Darwen, one with Syphilis and one with Gonorrhœa, made 34 attendances ; a total of 2,144 attendances.

Twenty-six males and 26 females, suffering from Syphilis, ceased attending before a cure was pronounced ; 44 females suffering from Gonorrhœa ceased attending in the same manner.

It is seen that at both Clinics a considerable proportion of patients cease attending before pronounced cured by the Medical Officer. This is unfortunate, but it is a characteristic of similar clinics throughout the country. Vigorous treatment for these diseases soon causes prominent and painful symptoms to disappear, and so patients think it is no longer necessary to pursue treatment. Such conduct is mistaken ; although certain symptoms may have abated, this is no criterion of cure, and a patient may remain infective, although apparently well. Especially in the case of Gonorrhœa is this a dangerous policy. This disease in women is very difficult to eradicate. Apparently all is well, but when the woman gives birth to a child, that child not infrequently develops Ophthalmia Neonatorum, which may lead to destruction, partial or complete, of the eyesight.

The diseases dealt with in this section are "Anti-Social Diseases." A no small proportion of the economic burden borne by the community at large is the result of the selfish habits of some members of the community So far our laws take no notice of the man or woman who causes loss of life through his or her carelessness in Health matters. This loss would be brought home more forcibly if collected statistics could be obtained setting forth the cost to the nation of the provision of public institutions, mental hospitals, and other agencies, whose beds are filled by patients brought there by this group of Venereal Diseases.

Preventive medicine is fast passing beyond the purely physical and interests itself more and more in the psychological, dealing thereby with the conduct which results in avoidable sickness and disability. It concerns itself with the early beginnings of disease and its measures are directed to the mental and sociological aspects, as well as to the physical side.

The faculties provided for diagnosis and treatment are known to all the medical practitioners in the town, and both Medical Officers are at all times willing to consult with practitioners upon their cases.

There are 12 practitioners whose names are on the approved register for the administration of Salvarsan and Salvarsan substitutes. Eleven doctors on this list availed themselves of the free supply, and 204 doses were supplied to them for the use of their patients.

The close co-operation with the officers of the Manchester Diocesan Association for Preventive and Rescue Work, was continued.

The Tables subjoined are the Ministry of Health's special Tables, in which are summarised the work done by the Blackburn Venereal Diseases Centres. The two Centres are dealt with separately.

BLACKBURN ROYAL INFIRMARY—V.D. Beds: Male 2; Female 2.

PARTICULARS OF STAFF.

	Duties.	If Employed Whole or Part-Time on Duties in V.D. Centre.
Medical Officers— Dr. W. Cran Duthie.	In charge of Male clinic.	Part-time.
Dr. E. Mackenzie	In charge of Female clinic..	Part-time.
Resident Medical Officers ..	Assist at male clinics	Part-time.
Nurses—Two	To prepare for and assist at clinics .. .. Do irrigations, &c., and keep registers	One whole time. One at female clinic only.
Male Attendants—Two ..	To prepare for and assist at male clinics. Do irrigations, &c., and general porter's work in connection with clinics.	One nearly whole-time and evenings and week-ends and one at clinics only.
Dispenser—One	General Dispensing duties	Four clinics per week.
Clerk	Preparation of statistical returns and general clerical duties	Part-time.

Full details of the various courses of treatment were given in my survey report last year, and it is unnecessary to recapitulate them, as no material alterations in procedure have been made.

TABLE 58.

RETURN relating to all persons who were treated at the Treatment Centre at the Blackburn and East Lancashire Royal Infirmary during the year ended the 31st December, 1926.

	Syphilis		Soft Chancre		Gonorrhœa		Conditions other than Venereal		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1. Number of cases which—										
(*a*) at the beginning of the year under report were under treatment or observation for	99	89	6	—	93	45	8	8	206	142
(*b*) had been marked off in a previous year as having ceased to attend or as transferred to other Centres, and which returned to the Treatment Centre during the year under report suffering from the same infection	21	6	..	..	15	6	4	2	40	14
Total—Items 1 (*a*) and 1 (*b*) ..	120	95	6	—	108	51	12	10	246	156
2 (*a*). Number of cases dealt with at the Treatment Centre during the year for the first time	53	34	3	—	122	54	82	56	260	144
Total—Items 1 (*a*), 1 (*b*) and 2 (*a*)	173	129	9	..	230	105	94	66	506	300
2 (*b*). Number of cases included in Item 2 (*a*) known to have received previous treatment at other Centres for the same infection	9	1	..	..	6	1	..	..	15	2
3. Number of cases which ceased to attend—										
(*a*) before completing the first course of treatment for	27	38	1	..	5	8	..	..	33	46
(*b*) after one or more courses but before completion of treatment for	6	36	..	..	..	8	..	..	6	44
(*c*) after completion of treatment, but before final tests as to cure of ..	8	14	..	..	4	2	..	..	12	16
4. Number of cases transferred to other Treatment Centres after treatment for	2	1	..	..	9	4	1	2	12	7
5. Number of cases discharged after completion of treatment and observation for..	22	16	1	..	31	6	89	62	144	84
6. Number of cases which, at the end of the year under report, were under treatment or observation for ..	108	24	7	..	181	77	4	2	299	103
Total—Items 3, 4, 5, and 6 ..	173	129	9	..	230	105	94	66	506	300
7. Out-patient attendances—										
(*a*) For individual attention by the Medical Officer	1251	1177	53	..	2394	1327	113	75	3811	2579
(*b*) For intermediate treatment, *e.g.*, irrigation, dressings, etc.	64	27	..	..	6049	531	..	..	6113	558
Total Attendances	1315	1204	53	..	8443	1858	113	75	9924	3137
8. Aggregate number of "In-patient days" of treatment given to persons who were suffering from ..	44	79	..	..	61	200	..	..	105	279

TABLE 58—(*Continued*).

	For detection of			*For*
	Spirochetes.	*Gonococci.*	*Other Organisms.*	*Wassermann Reaction.*
9. Examination of Pathological material :—				
(*a*) Specimens which were examined at, and by the Pathologist at the Treatment Centre	2	750	...	...
(*b*) Specimens from persons attending at the Treatment Centre which were sent for examination to an approved laboratory	...	...	...	471

Statement showing the services rendered at the Treatment Centre during the year, classified according to the areas in which the patients resided.

Name of County or County Borough (or Country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings.	*Blackburn*	*Lancashire*	*Burnley*	*Preston*	*Manchester*	*London*	*Total*
A. Number of cases from each area dealt with during the year *for the first time* and found to be suffering from :							
Syphilis	51	36	..	..	..	..	87
Soft chancre	1	2	..	..	..	..	3
Gonorrhœa	89	86	..	1	..	..	176
Conditions other than venereal ...	88	47	1	..	1	1	138
Total	229	171	1	1	1	1	404
B. Total number of attendances of all patients residing in each area ...	9139	3918	2	1	..	1	13061
C. Aggregate number of "In-patient days" of all patients residing in each area	185	199	..	..	..	..	384
D. Number of doses of arsenobenzol compounds given in the —							
1. Out-patient Clinic	846	649	..	..	..	..	1495
2. In-patient Department ...	10	2	..	..	..	..	12
to patients residing in each area							

E. Give the names of arsenobenzol compounds used in the treatment of Syphilis and the usual initial and final doses	Novarsenobillon in doses of 0·3 to 0·6 grammes and Sulfarsenal 0·45 to 0·6 grammes. Silver Salvarsan, 0·15 to 0·30 grammes; Stabilarsan, 0·45 to 0·6 grammes.
F. State the amount and kind of treatment usually administered to a case of Syphilis of each of the types usually dealt with at the Treatment Centre...	Similar to that published by Col. Harrison in the *British Journal of Venereal Diseases*, Jan., 1926. (This was given in full in the Report for 1925 of the M.O.H., Blackburn.)
G. State the nature of tests applied in deciding as to discharge of patients referred to in Item 5 on previous page	These were given in full in the M.O.H. Report for Blackburn in 1925.

(*Signed*) Ella Mackenzie, m.a., m.b.ch.b., d.p.h.,
W. Cran Duthie, m.b., c.m.,
Medical Officers of the Treatment Centre.

TABLE 59.

RETURN relating to all persons who were treated at the Treatment Centre at the Town Hall, Blackburn, during the year ended the 31st December, 1926.

	Syphilis		Soft Chancre		Gonorrhœa		Conditions other than Venereal		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1. Number of cases which—										
(*a*) at the beginning of the year under report were under treatment or observation for	18	26	..	..	..	35	2	10	20	71
(*b*) had been marked off in a previous year as having ceased to attend or as transferred to other Centres, and which returned to the Treatment Centre during the year under report suffering from the same infection	..	1	..	..	..	2	..	2	..	5
Total—Items 1 (*a*) and 1 (*b*) ..	18	27	..	..	..	37	2	12	20	76
2 (*a*). Number of cases dealt with at the Treatment Centre during the year for the first time	17	34	..	..	2	60	3	79	22	173
Total—Items 1 (*a*), 1 (*b*) and 2 (*a*)	35	61	..	..	2	97	5	91	42	249
2 (*b*). Number of cases included in Item 2 (*a*) known to have received previous treatment at other Centres for the same infection	..	2	..	..	..	..	..	..	..	2
3. Number of cases which ceased to attend—										
(*a*) before completing the first course of treatment for	17	13	..	..	..	41	..	..	17	59
(*b*) after one or more courses but before completion of treatment for	..	5	..	..	..	..	..	..	..	5
(*c*) after completion of treatment, but before final tests as to cure of ..	9	3	..	..	..	4	..	..	9	7
4. Number of cases transferred to other Treatment Centres after treatment for	..	5	..	..	..	10	..	..	..	15
5. Number of cases discharged after completion of treatment and observation for	1	1	..	..	2	5	..	..	3	6
6. Number of cases which, at the end of the year under report, were under treatment or observation for ..	8	29	..	..	..	37	..	4	8	70
Total—Items 3, 4, 5, and 6 ..	35	61	..	..	2	97	..	4	37	162
7. Out-patient attendances—										
(*a*) For individual attention by the Medical Officer	276	568	..	..	68	790	17	425	361	1783
(*b*) For intermediate treatment, *e.g.*, irrigation, dressings, etc.	..	..	..	..	..	..	..	..	..	..
Total Attendances	276	568	..	..	68	790	17	425	361	1783
8. Aggregate number of "In-patient days" of treatment given to persons who were suffering from ..	..	..	..	..	..	..	..	..	...	..

TABLE 59—(*Continued*).

	For detection of			*For*
	Spirochetes.	*Gonococci.*	*Other Organisms.*	*Wassermann Reaction.*
9. Examinations of Pathological material :—				
(*a*) Specimens which were examined at, and by the Medical Officer of, the Treatment Centre	..	..	..	..
(*b*) Specimens from persons attending at the Treatment Centre which were sent for examination to an approved laboratory.	..	200	..	87

Statement showing the services rendered at the Treatment Centre during the year, classified according to the areas in which the patients resided.

Name of County or County Borough (or Country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings.	*Blackburn.*	*Darwen.*	*Total.*
A. Number of cases from each area dealt with during the year for the first time and found to be suffering from :—			
Syphilis	50	1	51
Soft Chancre	..	..	..
Gonorrhœa	61	1	62
Conditions other than Venereal	82	..	82
TOTAL	193	2	195
B. Total number of attendances of all patients residing in each area	2110	34	2144
C. Aggregate number of "Inpatient days" of all patients residing in each area ..	—	—	—
D. Number of doses of arsenobenzol compounds given in the :—			
1. Out-patient Clinic	780	3	783
2. In-patient Dept.	..	..	..

E. Give the names of arsenobenzol compounds used in the treatment of Syphilis and the usual initial and final doses	N.A.B.—0·3 to 0·6 grammes; Sulfarsenal, 1½ ct. grms to 0·60 grms.
F. State the amount and kind of treatment usually administered to a case of Syphilis of each of the types usually dealt with at the Treatment Centre ..	ADULTS.—*Primary Syphilis*—Two or more courses of 10 intravenous injections of N.A.B. + Pil. Hydrarg. *Secondary Syphilis*—Three or more courses of 10 intravenous injections of N.A.B. + Pil. Hydrarg. INFANTS—One or more courses of 18 subcutaneous injections of sulfarsenal + Hyd. c Cret.
G. State the nature of tests applied in deciding as to discharge of patients referred to in Item 5 on previous page	ADULTS.—*Primary Syphilis*—When Blood is negative at start Patient is discharged if Blood remains negative for two years. *Secondary Syphilis*—If Blood positive at start Patient discharged when Blood negative two years after treatment has ceased without return of symptoms. INFANTS.—Discharged if no return of symptoms for two years after treatment has ceased. *Gonorrhœa*—Discharged when all clinical signs have disappeared and three successive negative smears obtained from Cervix and Urethra after a menstrual period and *provoc. vac.*

(*Signed*) ELLA MACKENZIE,
Medical Officer of the Treatment Centre.

MATERNITY AND CHILD WELFARE.

The Notification of Births Act, 1915.

This Act requires that all births should be notified to the Medical Officer of Health within 36 hours of their occurrence.

Upon this Act the whole system of Health Visiting rests. Notifications were received from :—

	Live Births.	*Still Births.*
Doctors	153	26
Midwives	1465	61
Parents and others	201	5

To keep a check on the notifications, the returns of the Registrars of Births are compared with the notification lists, and a letter is sent to the parents of any child whose birth has not been notified ; 130 letters were despatched during 1926, one more than in 1925.

The percentage of Births notified by midwives was 80·5, as compared with 81·9% in 1925, and 82% in 1924. The percentage of births notified by doctors was 9·4%, as compared with 7·9% in 1925.

As years pass by the visits of the Health Visitors seem to be more and more appreciated. The hostility met with in the early years has vanished, and such passive obstruction as may yet exist only remains among the older mothers, or, more particularly, the grandmothers. The suspicion with which some members of the medical profession used to regard this measure has also died away.

ANTE-NATAL SUPERVISION.

The Ante-Natal Clinic initiated in 1921, and conducted by the lady Assistant Medical Officer, has been continued. Two sessions are held weekly. Four hundred and eighty prospective mothers made 1,435 attendances ; an increase of 54 and 152 respectively over 1925.

The following Table gives full details :—

TABLE 60.

Number of Sessions held	99
Number of Attendances made	1435
Number of Individuals who attended and were examined	480
Number of normal labours resulting	237
Number of abnormal labours resulting	55
Number of Women found to be not pregnant	103

Number of Women whose confinement had not yet supervened at the end of 1926	67
Women sent by Health Visitors and from Centres . .	103
Women sent by the Matron of Springfield Maternity Home	136
Women sent by Doctors . .	62
Women sent by Midwives	59
Women who came on their own initiative	35
Women sent by another patient	80
Women sent by the Matron of the District Nurses' Association	4
Women sent by the Relieving Officer . .	1

Of the patients examined, 174 were primigravidæ, and 203 multigravidæ, whilst of those undelivered on December 31st, 1926, 29 were primigravidæ, and 27 multigravidæ.

The 55 abnormal labours were as follows :—

Instrumental	14	Premature Births	9
Still Births . .	16	Antepartum Hæmorrhage . .	1
Cæsarian Section	3	Miscarriage . .	2
Malpresentations	10		

One case of Cæsarian Section and the case of Antepartum Hæmorrhage died.

Analysis of the above details shows a Still-Birth rate of 5·4% ; a maternal mortality of 13·7 per 1,000 births. For the whole population the corresponding rates were : Still Births, 5·9%, and Maternal Mortality 8·03 per 1,000.

Of the 480 patients who attended, 239 (49·8%) were sent by some branch of the Department ; 13% were sent by Doctors, and 12·3% by Midwives ; 7·3% of the women came on their own initiative, whilst 17·6% were advised to come by other patients who had attended. It is apparent from this that the mothers themselves have a greater realisation of the benefits of skilled ante-natal supervision than have the midwives. When it is remembered that 80·5% of the confinements were attended by midwives, and they usually see the patient before anyone else, it must be admitted that the number of patients sent by midwives to the Ante-Natal Clinic is disappointing. In 1925 7·5% of the cases attending the Clinic were sent by midwives ; there is, therefore, an improvement of 4·8% in 1926. The number and percentage of patients sent by another patient has much increased. This is a gratifying feature.

The following is of purely medical interest, and gives the Complications found by the examining medical officer. I am indebted to Dr. E. Mackenzie for the details in this and the previous Table.

TABLE 61.

	Primagravidæ	Multigravidæ	Non-Pregnant	Total.
Contracted Pelvis	11	8	..	19
Albuminuria	77	77	3	157
Hyperemesis Gravidarum	6	7	..	13
Varicose Veins	58	91	1	150
Hæmorrhoids	0	0	1	1
Cardiac Disease	7	9	1	17
Anæmia	5	8	5	18
Threatened Abortion	0	2	0	2
Inevitable Abortion	0	1	0	1
Venereal Disease	6	23	10	39
Vaginal Discharge (not Venereal)	33	52	21	106
Uterine Displacement	..	5	24	29
Malpresentation	4	0	0	4
Bronchitis and Asthma	1	2	2	5
Pulmonary Tuberculosis	1	0	0	1
No complications found	37	27	6	70
Torn Perineum	..	2	2	4
Endometritis	0	0	1	1
Constipation	32	18	..	50
Sterility	0	0	2	2
Inguinal Hernia	0	0	1	1
Cervical Erosion	0	0	9	9
Multiple Myomata	0	0	1	1
Cervical Polypus	0	2	4	6
Menopause	0	0	4	4
Torn Cervix	0	3	6	9
Arthritis	0	0	5	5
Nephritis	0	0	3	3
Enlarged Thyroid	1	2	0	3
Uterine Carcinoma	0	0	2	2
Breast Carcinoma	0	0	1	1
Psoriasis	2	0	0	2
Ovarian Cyst	1	0	0	1
Dysmenorrhœa	0	0	1	1
Cholecystitis	0	0	1	1
Epilepsy	0	1	0	1
Stitch Abscess	0	1	0	1
Otorrhœa	1	0	0	1
Rectal Prolapse	0	0	1	1
Retracted Nipples	1	0	0	1

Of the abnormalities found the most usual were : Varicose Veins, 20·2% ; Albuminuria, 21·1% ; Contracted Pelvis, 2·5% ; and Venereal Disease, 5·2%. All these complications may become serious and a danger to the mother's life, whilst in addition, the infant's life may be imperilled in cases of Contracted Pelvis, Albuminuria, and Venereal Disease.

MATERNAL MORTALITY.

There were 14 deaths intimately associated with pregnancy, as compared with 11 in 1925. The maternal mortality rate for 1926 was consequently 8·03 per 1,000 births, compared with 5·7 per 1,000 in 1925. In other words one mother died for every 124·5 living babies born.

The figures include heart disease or other conditions in which there was a pre-existing pathogenesis. It seems reasonable to consider that the strain of child-bearing brought about the final breakdown, which would not have occurred in all probability if this superadded emergency had not to have been met. Consequently, the labour of child-bearing was immediately responsible for death, and should be stated to be the cause of death. Naturally, including these cases makes the rate higher, but I feel it is a truer picture of the toll of childbirth.

This maternal mortality rate is alarmingly high. Since 1911 it has not reached so large a figure.

Table 62 gives full details for all years since 1911.

TABLE 62.

Year	Births	Preventable Causes						Possibly Preventable Causes		Not Preventable Causes						Influenza	Total	Maternal Mortality	Infant Mortality
		Puerperal Fever and Sepsis	Hæmorrhage P.P.H.	Cæsarian Section	Shock	Exhaustion	Ruptured Uterus	Eclampsia	Contracted Pelvis	Placenta Prævia	Pulmonary or other Embolism	Heart Disease	Syncope	Acute Nephritis	Asthma and Pulmonary Disease				
1911	2857	8	..	..	..	1	..	4	..	3	2	1	1	1	..	..	21	7·3	186
1912	2737	5	..	..	..	1	..	3	..	1	..	1	..	1	..	..	12	4·3	119
1913	2915	3	2	..	..	2	1	3	..	1	..	1	..	..	1	2	16	5·4	147
1914	2805	7	1	..	2	1	..	2	2	1	..	1	..	..	1	..	18	6·4	116
1915	2452	3	1	..	..	..	..	2	..	1	..	..	..	1	..	..	8	3·2	145
1916	2065	4	..	..	1	..	..	1	1	..	1	..	..	..	..	..	8	3·8	121
1917	1626	2	1	..	..	2	..	3	1	..	1	..	..	..	..	..	10	6·1	110
1918	1552	3	..	..	..	..	..	2	1	2	..	..	..	..	3	..	11	7·0	125
1919	1838	5	3	..	..	1	..	2	..	..	..	..	..	..	..	..	11	6·0	94
1920	2827	3	3	..	..	1	1	3	1	3	..	1	..	..	..	..	16	5·7	110
1921	2528	7	..	..	..	..	..	2	..	..	2	..	..	..	..	..	11	4·3	109
1922	2177	5	1	..	2	..	..	..	2	2	1	..	1	..	1	..	15	6·8	98
1923	2094	9	1	..	..	..	..	..	..	1	1	..	..	1	1	..	14	6·7	100
1924	1980	3	2	1	..	..	..	..	..	2	..	1	..	1	..	..	10	5·0	84
1925	1902	5	..	..	..	..	1	2	..	1	..	2	..	..	..	..	11	5·7	97
1926	1743	7	2	..	1	1	..	2	..	..	..	..	1	..	..	..	14	8·03	89
Tot'l.	35098	79	17	1	6	10	3	31	8	18	8	8	3	5	7	2	206	5·8	115

It is seen that the causes of death are grouped under three main headings : Preventable, Possibly Preventable, and Not Preventable. In 1926, deaths from the classified Preventable causes numbered 78·6% of the total deaths. From Possibly Preventable causes 14·3%, and from Not Preventable causes 7·1%. In 1925, the figures were 54·5%, 18·2% and 27·3% respectively.

For the whole series of years included the deaths classified in the same manner were : Preventable causes, 56·3% ; Possibly Preventable, 18·9% ; and Not Preventable, 24·7%.

Puerperal Fever and other sepsis accounted for 7 out of the 14 maternal deaths during 1926. Since 1911 these causes have brought about 79 deaths out of a total of 206 (38·3%), and they rank easily as the "Captains of the men of Death " in regard to maternal mortality. Eclampsia is next in importance with a total of 31 deaths—2 in 1926—or 15·0%.

Puerperal Sepsis. I have headed this section in this manner, though Puerperal Sepsis is not notifiable under that name. The uncertain term, Puerperal Fever, was the one used for notification purposes, but by the Puerperal Fever and Puerperal Pyrexia Regulations, 1926, which came into force on October 1st, all cases of a sustained or intermittent temperature over 100·4 F., occurring for 36 hours, and during the puerperium are notifiable. It cannot be doubted that the notification of Puerperal Fever had degenerated into something akin to a farce. It had broken down for several reasons. Firstly, because no satisfactory definition of the term has yet been evolved ; secondly, because there is insufficient hospital accommodation for the proper treatment and nursing of these cases ; and thirdly, because, for some reason or other, there is a feeling of opprobrium connected with the public acknowledgment of the occurrence of a case.

Under the new regulations local authorites may, make hospital provision for these cases, make arrangements for pathological examinations, and for consultative facilities. A special ward has been set aside and adapted at the Corporation Hospital for the reception of cases ; pathological examinations are carried out for Blackburn medical practitioners—free of charge to the patient—by arrangement with the laboratories attached to the Universities of Liverpool and Manchester ; whilst a second opinion can always be obtained if requested. Full facilities are consequently available, it only remains for medical practitioners and their patients to avail themselves of these facilities. Whether these new regulations will bring about a reduction in the incidence, or the mortality of Puerperal Pyrexia, is a problem for the future to solve. There is a tendency to imagine that, in order to eradicate a disease, it is only necessary to make it notifiable. There is no substance in such an opinion. Notification may be a very fragile reed to lean upon for reasons which operated in the former notification of Puerperal Fever.

Eleven cases of Puerperal Fever and 11 cases of Puerperal Pyrexia were notified. This is a rate of 6·3 per 1,000 births in each instance. For the past five years the rates for Puerperal Fever have been : 1921, 5·9 ; 1922, 3·2 ; 1923, 5·7 ; 1924, 5·0.

The following Table gives fuller details concerning these cases :—

	Puerperal Fever.	*Puerperal Pyrexia*
Number of Cases Notified	11	11
,, Attended by Doctor alone at Confinement	3	4
Number of Cases Attended by Doctor and Midwife at Confinement	4	6
Number of Cases Attended by Midwife alone ..	4	1
,, Treated at home only ..	2	6
,, Treated at Home who Died ..	2	1
,, Treated at Hospital only ..	7	5
,, Treated at Hospital only who died	2	0
Number of Cases Treated partly at Home and partly in Hospital	2	0
Number of Cases Treated partly at home and partly in Hospital who Died	1	0
Total Number of Cases who died	5	1
,, ,, Recovered.. ..	6	10

This Table indicates that cases removed to, and treated in, hospital, have a better recovery rate than those who remain at home. Considering the better nursing facilities available in the former, this is not a surprising result.

In order to obtain some information as to the accommodation usually available for confinements in private houses, I have collected figures from details furnished by the Health Visitors. The six Districts mentioned are the same as those given in the Section on The Work of the Health Visitors (page 153).

TABLE 63.

PERCENTAGES OF BIRTHS.

Accommodation Provided.	Districts. I.	II.	III.	IV.	V.	VI.	Total Births.	Total %
PRIVATE HOUSES—								
Bedroom	31·4	50·5	47·0	30·5	57·8	46·6	802	44·5
Kitchen or Living Room ..	49·4	25·2	14·8	44·7	9·8	23·0	492	27·3
Sitting Room	6·3	9·3	12·1	10·7	8·9	11·0	173	9·6
INSTITUTIONS—								
Municipal Maternity Home.	8·6	12·5	6·0	4·0	17·3	15·7	201	11·2
Union Infirmary	0·6	0·3	7·4	2·5	1·0	1·4	38	2·1
Royal Infirmary	1·4	1·6	6·3	1·0	0·3	0·3	33	1·8
OTHER PLACES—								
Midwife's House	1·7	0·0	3·0	6·1	4·2	1·0	43	2·4
Others	0·6	0·6	3·4	0·5	0·7	1·0	20	1·1

The above Table indicates that 1,467 births (81·4%) occurred in the parents' dwelling house ; 272 in institutions, and 63 in other places. Of the confinements in private houses, 27·3% took place in the kitchen, or living-room.

The lack of privacy incidental to, and the general unsuitableness of, the living-room as a place for a confinement hardly needs emphasising. It is hoped that more and more mothers will avail themselves of the undoubted advantages possessed by the Municipal Maternity Home. The relief from home worries during a critical period, the skilled nursing, and the privacy are conditions which should weigh heavily in determining a mother's mind.

Premature Births. A small enquiry into the after histories of prematurely born, living infants has been carried out during the year. The condition at the end of 12 months has been taken and so, naturally, part of the investigation is incompleted. So far 51 premature children have been followed up, and of these only six were living at the end of 12 months. Thirty-five died under one week old ; eight died during the first month of life, and two died between the second and third months. Prematurity is seen to be a great handicap on the chances of survival of infants.

SPRINGFIELD MUNICIPAL MATERNITY HOME.

The Home has been in operation throughout the year. A total of 212 patients were admitted, being 39 fewer than in 1925.

Considerable changes have been made in personelle ; a new Matron has been appointed, whilst the policy of engaging only fully trained nurses, who are also qualified midwives, has been followed. Although this naturally entails rather greater expense, it is felt that it is justifiable, as the aim is to provide in Springfield the best nursing and midwifery service it is possible to obtain. The midwifery service is run on strict hospital lines, the greatest care being exercised to maintain a high standard of aseptic midwifery.

No structural alterations or additions were carried out during the year.

TABLE 64.

Statistical Report for 1926.

No. of Cases in Residence January 1st, 1926	5
No. of Cases in Residence January 1st, 1927	6
1. Total No. of Cases Admitted	212
2. Average Duration of Stay	14 days
3. (*a*) No. of Cases delivered by Doctors	26
(*b*) No. of Cases delivered by Midwives	177
4. No. of Cases in which Medical assistance was sought by the Midwife with reasons for requiring assistance :—	
(*a*) Ante-Natal	*Nil.*
(*b*) During Labour—	
Delayed labour	7
Malpresentation	5
Malformed perineum	1
Fœtal distress.	1
(*c*) After Labour :—	
Retained Membrane	1
Post partum hæmorrhage	1
Ruptured Perineums	34
(*d*) For Infant :—	
Dangerous feebleness.	3
Pneumonia.	1
Convulsions	1

5. No. of Cases notified as (*a*) Puerperal Fever *2

*One of these cases was transferred to the Corporation Hospital, with Phlegmasia Alba Dolens. She ultimately recovered.

The second case was a subacute type of Septicæmia, and was removed to her home.

6. No. of Cases in which Temperature rose above 100·4°F. for 24 hours, with rise of pulse rate .. .. *Nil.*

7. No. of Cases notified as Ophthalmia Neonatorum 4

The eyes were quite clear in each case when discharged from the Home.

8. No. of Cases of " Inflammation of the Eyes " however slight 9

All the eyes were clear on discharge.

9. No. of Cases of Pemphigus Neonatorum 1

The umbilicus remained moist after cord separated. Pemphigus on abdomen, buttock and neck.

10. No. of Infants not entirely breast fed while in the Institution (with reasons why they were not breast fed) 1

The mother was suffering from advanced Pulmonary Tuberculosis.

11. No. of Maternal Deaths with causes .. .. *Nil.*

12. No. of Fœtal Deaths (*a*) Still Born, or (*b*) within 10 days of birth) and their causes—and the results of the post-mortem examination, if obtainable :—

(*a*) Macerated 3
Asphyxia 2

(*b*) Prematurity 6
Congenital Heart Disease 1
Convulsions. 1
Pneumonia. 1

13. Total number of Cases (Mothers or Infants) for which a private medical man was in attendance 93

STILL BIRTHS.

During 1926, 83 Still Births were notified, giving a proportion of one still-born child to 21·0 living children. There were 9 more Still Births than in 1925. The Still Birth rate is 4·8% registered live births. For past years the rates have been : 1921, 5·2 ; 1922, 4·6 ; 1923, 4·9 ; 1924, 4·5 ; 1925, 3·9.

Notification of Still Births is not compulsory, but the figures given are probably accurate, as the Staff of the Maternity and Child Welfare Department obtain information about Still Births during their routine visiting.

The following Tables give fuller details of these Still Births.

TABLE 65.

STILL BIRTHS, 1926.

53 Notified by Midwives.
17 ,, Doctors.
13 ,, Institutions—Total 83.
26 Attended by Midwives alone.
10 ,, Doctors alone.
34 ,, Midwives and Doctors.
13 ,, Institutions.
39 occurred at 9 months.
18 ,, 8 months.
23 ,, 7 months.
2 ,, 5 months.
1 Term not known.

ASCRIBED CAUSES OF STILL BIRTHS :—

I.	*Complications of Labour* :—	
	Contracted Pelvis	2
	Transverse Presentation	2
	Breech Presentation	16
	Prolonged or Difficult Labour in—	
	(*a*) Face Presentation	2
	(*b*) Vertex—Occipito Anterior presentation	4
	(*c*) Other malpresentations (footling, etc.)	4
	Difficult Forceps Deliveries	3
	Excessive size of fœtus	1
	Prolapse of cord	2
	Cord round fœtus	2
II.	Placenta Prævia	2
	Accidental Hæmorrhage	5
III.	Eclampsia	1
	Albuminuria	8
IV.	Probable Syphilis	3
V.	Multiple Pregnancy	1
VI.	Prematurity	1
VII.	Causes unknown	33

An investigation into the causes of Still Births and Neonatal deaths, carried out under the auspices of the Medical Research Council, was published towards the end of 1926 ; 1673 cases were investigated and the following is a brief summary of the conclusions arrived at :—

(*a*) Maternal ill-health during pregnancy is a factor of great importance in relation to the occurrence of dead-births, (*b*) The frequency of intracranial lesions is high. Tears of the cerebral membranes were noted in just over 25% of all cases of still births and neonatal deaths in the entire series.

(*c*) Some of these tears were due to spontaneous breech labour, or other difficult labours, but the majority were associated with the use of forceps, or the practice of podalic version.

(*d*) A high proportion of intra-natal mortality is due to manipulations of some kind or other, and the report emphasises that efforts should be directed towards the reduction of the need for obstetric interference. It stresses repeatedly and emphatically the necessity for, and the value of, skilled ante-natal examination and supervision.

OPHTHALMIA NEONATORUM.

Nineteen cases of Ophthalmia Neonatorum were notified during the year.

The following Table gives the notifications in Blackburn during the past nine years :—

	1918	1919	1920	1921	1922	1923	1924	1925	1926
Number of Cases	15	18	22	23	19	15	15	25	19
Rate per 1,000 Births	9·6	9·7	7·7	9·1	8·7	7·2	7·6	13·2	10·9

Of the cases notified, 12 were notified by Doctors, and 7 were notified from Institutions. Midwives can no longer notify Ophthalmia Neonatorum (Ophthalmia Neonatorum Regulations, 1926).

TABLE 66.

RESULTS OF TREATMENT.

Cases Treated.			Vision Unimpaired	Vision Impaired	Total Blindness	Deaths.
Notified	At Home.	In Hospital				
19	10	9	16	—	1	2

In the two deaths, Ophthalmia was not the cause of death. Eight of the cases treated at home were attended by District Nurses.

There are indications that cases of Ophthalmia are increasing somewhat in severity, and also in number. I believe that a considerable number of cases of mild inflammation are never notified. Under the regulations mentioned above only a doctor can notify, but as a midwife has, by the Rules of the Central Midwives' Board, to send for medical help for all cases of inflammation of the babies' eyes, there is no material disparity in the end results, for copies of all medical help forms are sent to the Health Office.

There is a mistaken impression in the minds of some midwives, and occasionally doctors also, that a case is not Ophthalmia Neonatorum unless caused by the Gonococcus. Ophthalmia of the newly-born covers all cases of inflammation of a baby's eyes coming on within 21 days after birth. Instances have arisen when the cause for such inflammation has appeared to be undue vigour of treatment. In her anxiety to avoid any suspicion of neglect, the midwife uses, firstly, eye solutions of too great strength, and secondly, exerts excessive vigour in cleansing the eyes. Mistakes under both these headings have to my knowledge, caused severe inflammation. Gonorrhœal inflammation comes on a day or two after birth, and rapidly becomes worse. This type of the disease is grave, resulting, not infrequently, in permanent damage to the eye.

TABLE 67.

MATERNITY AND CHILD WELFARE.—DEATHS OF INFANTS UNDER ONE YEAR OF AGE.

Month.	1926					1925.			1924.		
	Births.	Deaths.	Mortal'y per 1000 Births	General Birth Rate	General Death Rate	Mortali'y per 1000 Births	General Birth Rate	General Death Rate	Mortali'y per 1000 Births	General Birth Rate	General Death Rate
January	135	150	96	12·8	14·1	154	14·3	16·8	105	15·4	15·6
February	129	148	70	13·5	15·5	130	14·9	17·2	109	15·1	13·6
March	171	142	123	16·1	13·4	103	17·0	16·7	101	14·4	25·4
April..	142	146	85	13·8	14·2	78	15·7	13·2	123	17·5	22·1
May	152	128	112	14·3	12·1	78	15·4	13·0	79	15·0	13·0
June	154	135	71	15·0	13·2	125	15·3	11·9	31	15·0	10·7
July	126	100	97	11·9	9·4	40	16·4	8·8	88	16·5	10·1
August	172	111	35	16·2	10·5	30	15·4	8·8	62	14·6	8·1
September	132	113	45	12·9	11·0	85	14·4	13·6	30	15·2	14·3
October	156	120	51	14·7	11·3	138	10·8	12·5	31	14·6	8·6
November	131	169	69	12·8	15·9	120	14·4	15·6	76	14·8	13·7
December	143	154	190	13·9	14·5	115	15·3	18·7	142	15·3	15·4
TOTALS	1743	1616	89	14·0	12·9	97	14·9	13·9	84	15·3	14·0

Table 67 shows that in 1926 the Infantile Death Rate was lowest in August, September and October. These months were warm and comparatively dry. As might be expected, the death-rate was highest during the six winter months, never falling below 100, and in December reaching the high figure of 190. But for this unfortunate accentuation of the Death Rate in December, 1926 would have shown the lowest Infantile Mortality rate yet recorded for Blackburn

In 1925 a similar seasonal curve was noticeable, but the winter rise was higher and more prolonged. The 1920 curve showed its highest peak in the Spring months, and so differed considerably from the 1924, 1925 and 1926 curves.

TABLE 68.

INFANTILE MORTALITY IN WARDS AND COMPARISON WITH DENSITY OF POPULATION.

WARD	Estimated Population middle of 1926 1	Persons per Acre 2	Rooms per person 3	Births 4	Birth Rate 5	Infantile Mortality 6	Deaths 7	Death Rate 8	Natural Incre'se or Decrease of Popul'n 1925–6 9	Census Population 1926 (March) 10
St. Stephen's ..	10823	9·2	1·08	153	14·1	130	135	12·4	+18	11212
Trinity	8708	58·0	1·05	129	14·8	62	103	11·8	+26	8696
St. Michael's ..	8820	14·1	1·10	102	11·5	78	86	9·7	+16	8787
St. John's	7066	69·2	1·13	105	14·8	66	88	12·4	+17	6957
St. Silas's	8857	8·9	1·50	74	8·3	67	99	11·1	—25	9210
St. Paul's	9591	78·0	1·12	155	16·1	83	136	14·1	+19	9715
St. Peter's	6593	51·1	1·05	105	15·9	104	104	15·7	+1	6613
St. Mary's ..	5424	31·8	1·02	94	17·3	158	123	22·6	—29	5474
St. Matthew's ..	9156	83·2	1·05	141	15·4	106	116	12·1	+25	9200
St. Thomas's ..	11855	6·8	1·08	132	11·1	53	146	12·3	—14	11941
Park	9318	14·3	1·08	134	14·3	75	127	13·6	+ 7	9467
St. Luke's	7439	44·2	1·03	119	15·9	92	101	13·6	+18	7641
St. Mark's	10238	25·5	1·13	141	13·7	99	111	10·8	+30	10311
St. Andrew's ..	10512	9·2	1·07	159	15·1	75	141	13·4	+18	11273
	124400	16·2	1·11	1743	14·0	89	1616	12·9	+127	126497

It will also be noticed that the Infantile Mortality Rate does not rise and fall synchronously with the general Death Rate or the Birth Rate, though the tendency is for a high infantile mortality rate to be accompanied by a high general death-rate, and conversely a low infantile mortality by a low general death-rate. Influences which are deleterious to babies are also deleterious to the aged and the infirm, for the resistance of the one is much on a level with that of the other.

The above Table gives some interesting figures showing the relationship between room space, persons per acre, the birth-rate and infantile mortality in the various wards of the town.

The local census taken in March, 1926, shows decreases in all wards, with the exception of St. Stephen's, St. Silas's, St. Luke's, and St. Andrew's. A marked increase is shown in the last-named ward, and is accounted for by migration of population from the centre of the town to the outskirts, and also by the occupation of new houses. Wards showing the greatest decreases are St. John's, St. Michael's, and Trinity.

Infantile Mortality is highest in St. Mary's, where it reaches the rate of 158 per 1,000 births. This ward has also the highest birth-rate and the highest general death-rate. Next comes St. Stephen's with 130. As against these high rates may be contrasted St. Thomas's, with 53 per 1,000, and Trinity, with 62 per 1,000. The disparity between St. Mary's Ward and St. Thomas's is great, yet the general housing conditions do not show very big differences. The birth-rate in St. Thomas's was, however, very low. St. Silas's lost its favourable position as regards infantile deaths, its rate being 67, as compared with 29 in 1925, but taking a period of 10 years—a truer indication of the position—St. Silas's shows a pronounced superiority. St. Mary's and St. Peter's are the two wards into which it is most dangerous for a baby to be born.

In 1915 the first great enactment relating to Child Welfare was passed, and 1916 was the first year throughout which its provisions were in operation. St. Silas's Ward shows the greatest relative reduction in infant mortality during this period ; St. Thomas's, St. Peter's, St. Mary's and St. Mark's the least.

TABLE 69.

INFANTILE MORTALITY IN WARDS FROM 1917 TO 1926.

WARD.	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	Average for 10 y'rs
St. Stephen's	86	145	116	136	92	67	56	68	65	130	96
Trinity	102	121	118	117	130	129	163	60	101	62	110
St. Michael's	93	113	53	106	83	78	105	99	80	78	88
St. John's	103	133	129	111	140	76	75	101	61	66	99
St. Silas's	73	100	51	53	59	69	50	44	29	67	59
St. Paul's	135	146	90	124	134	133	130	76	107	83	115
St. Peter's	180	147	68	197	114	170	91	149	105	104	132
St. Mary's...	127	213	131	138	98	138	128	99	188	158	141
St. Matthew's	111	118	75	100	127	111	90	120	65	106	102
St. Thomas's	112	75	88	90	106	71	130	76	84	53	88
Park	142	157	101	125	108	69	110	86	118	75	109
St. Luke's...	101	122	117	99	99	116	74	90	118	92	102
St. Mark's...	111	97	95	73	129	106	85	60	122	99	97
St. Andrew's	84	91	75	81	87	72	81	73	110	75	82
Borough	110	125	94	110	109	98	100	84	97	89	101

TABLE 70.—DEATHS UNDER ONE YEAR, ARRANGED ACCORDING TO DAYS, WEEKS AND MONTHS.

CAUSES OF DEATH.	1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	1st week.	2nd week.	3rd week.	4th week.	Under 1 month.	1 month to 2.	2 months to 3.	3 months to 4.	4 months to 5.	5 months to 6.	6 months to 7.	7 months to 8.	8 months to 9.	9 months to 10.	10 months to 11	11 months to 12	TOTAL.
All Causes Certified	32	5	8	2	2	3	2	54	7	13	6	80	9	10	11	4	4	7	7	5	3	8	8	156
All Causes Uncertified	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Smallpox	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Chickenpox	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Measles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Scarlet Fever	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Whooping-cough	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	2	–	–	1	–	–	1	1	6
Diphtheria and Croup	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	1
Erysipelas	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tuberculous Meningitis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Abdominal Tuberculosis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1
Other Tuberculous Diseases	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	1
Meningitis (*not Tuberculous*)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	1	1	–	–	–	4
Convulsions	–	–	1	1	–	–	1	3	–	1	–	4	–	–	–	–	–	–	–	–	–	–	–	4
Laryngitis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Bronchitis	–	–	–	–	–	–	–	–	1	1	1	3	3	1	1	–	1	1	–	–	1	4	–	15
Pneumonia (*all forms*)	–	–	–	–	–	–	–	–	–	–	–	–	1	3	2	1	2	2	1	4	1	3	3	23
Diarrhœa	–	–	–	–	–	–	–	–	–	1	1	2	1	1	–	–	–	2	1	–	–	–	–	7
Enteritis	–	–	–	–	–	–	–	–	–	1	–	1	–	–	1	–	–	–	–	–	–	–	–	2
Gastritis	–	–	–	–	–	–	–	–	–	–	1	1	–	1	1	–	–	–	–	–	–	–	–	3
Syphilis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Rickets	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Suffocation, overlying	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Injury at birth	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Atelectasis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Congenital Malformations	2	–	1	–	1	1	–	5	2	–	–	7	1	1	–	–	–	–	1	–	–	–	–	10
Premature Birth	22	5	4	–	1	2	–	34	–	5	2	41	–	–	–	–	–	–	–	–	–	–	–	41
Atrophy, Debility and Marasmus	7	–	1	1	–	–	1	10	4	4	–	18	3	–	4	–	–	–	–	–	–	–	–	25
Other causes	1	–	1	–	–	–	–	2	–	–	1	3	–	1	2	1	–	–	1	–	1	–	2	11
TOTAL	32	5	8	2	2	3	2	54	7	13	6	80	9	10	11	4	4	7	7	5	3	8	8	156

Nett Births registered during the calendar year ...	legitimate	1667
	illegitimate ...	76
Nett Deaths registered during the calendar year of	legitimate infants	150
	illegitimate infants ...	6

ANALYSIS OF THE CAUSES OF INFANT DEATHS IN BLACKBURN.

For the past five years the numbers of infant deaths have been: 1922, 215; 1923, 210; 1924, 167; 1925, 186; and 1926, 156.

A total of 156 infants out of 1743 born died within one year of birth. Table 70 shows that 80 died within a month of birth. The death-rate during this period is known as the Neo-Natal Mortality. For 1926 the Neo-Natal Mortality was 45·8 per 1,000 live births. For past years the figures are:—

1920	54·8	1923	47·2
1921	49·8	1924	30·0
1922	39·9	1925	37·8

The average Infantile Mortality rate for the decennium 1917—1926 was 101; and for 1906—15, 151.

Among the 156 deaths, 88 occurred in boy babies, and 68 in girls; 875 born were males, and 868 females. The Infantile Mortality for the two sexes was, therefore: Boys, 100·57; Girls, 78·34.

The rate of Infantile Mortality amongst illegitimate infants was 79 per 1,000 illegitimate births. The rate in legitimate children was 89 per 1,000 legitimate births.

The rate of Infantile Mortality for England and Wales in 1926 was 70 per 1,000 births, and for the 105 large towns, 73. The rate for Blackburn is, consequently, higher than the average rate.

An analysis of Table 70 shows that 51·3% of the deaths occurred before the end of the first month of life, and of these, 26·9% were males and 24·4% females; 34·6% died before the end of the first week. The percentages occurring during the several periods are:—First week, 34·6%; second week, 4·5%; third week, 8·3%; fourth week, 3·8%; 1—3 months, 12·1%; 3—6 months, 12·1%; 6—9 months, 12·1%; 9—12 months, 12·5%.

From these figures it may be reasonably inferred that at least 34·6% of the infant deaths were due to uncontrollable causes, except in so far as accidents of birth were concerned. In 47·4% of the deaths conditions such as management, feeding and general care probably played quite a minor role.

The great causes of Infant Deaths in 1926 were as under stated :—

TABLE 71.

PERCENTAGE DEATHS PER TOTAL INFANTILE DEATHS.

	1926	1925		1926	1925
Premature Birth	26·3	20·9	Debility and Marasmus	16·0	9·1
Respiratory Diseases ..	24·3	25·8	Diseases of Digestion ..	7·7	6·4
Infectious Diseases including Tuberculosis ..	9·5	9·1	Accidental and Congenital	6·4	5·9

DEATHS PER 1,000 BIRTHS.

	1926	1925		1926	1925
Premature Birth	23·5	20·5	Debility and Marasmus	14·3	8·9
Respiratory Diseases ..	21·8	25·2	Diseases of Digestion..	6·9	6·3
Infectious Diseases, including Tuberculosis ..	8·6	8·9	Accidental and Congenital	5·7	5·7

One case of prematurity was stated to have been caused by Syphilis.

In infants under one month of age, Prematurity accounted for 51·3% of the deaths, and Congenital Defects for 8·7%, Debility and Marasmus for 22·5%. Taking these groups together, 82·5% of the neo-natal deaths was due probably to causes operating before the birth of the baby and not remediable or preventable after birth. The condition of an infant at birth depends very much upon the health of the mother, her general state of nutrition, the nature of the confinement, and her physical conformation. It is in the prevention of this neo-natal mortality that Ante-Natal work exerts its greatest benefits. The need for careful medical ante-natal supervision is apparent to all who study the facts, but, unfortunately, the mothers themselves are slow to realise its importance, both in safeguarding their own life and in ensuring the birth of a healthy, well-developed child. The influence of the employment of mothers during their pregnancy is uncertain. There are no definite facts to show that a specific deleterious action is exerted, other things being equal.

Neo-Natal Deaths :—

The following Table gives details of infant deaths occurring up to the end of the second month of life :—

I. *Complications of Labour :—*		
(*a*) Transverse Presentation	1	3·4%
(*b*) Difficult Labour	2	
II. *Fœtal States :—*		
(*a*) Spina Bifida	3	24·7%
(*b*) Other Deformities	1	
(*c*) Congenital Heart Malformation	5	
(*d*) Apnœa	3	
(*e*) Debility	10	
III. Prematurity (including Syphilis)	42	47·2%
IV. Deaths due to Post-Natal Causes	22	24·7%

A rather different group of deaths are those occurring between the end of the first month and the end of the first year. In this group motherhood and environment play the dominant role. Environment makes its influence felt in the high death-rate from Respiratory Diseases and the Infectious Diseases. It is this group of ailments which causes the disparity between Infantile Mortalities in the industrial towns and those in the rural districts. Atmospheric pollution certainly is an important factor. Respiratory Diseases caused 46·0% of the total infant deaths between one month and one year.

No deaths from the Infectious Diseases occurred in the first month, but during the following period up to the end of the first year, 15 deaths were registered (19·7%). Diarrhœa and Enteritis have not been included in this group.

What may be called essentially Environmental Diseases brought about a death-rate of 65·7% of the total deaths in the age period under review.

The influence of good or bad mothering is perhaps reflected in the deaths from Digestive and Nutritional disturbances. This group caused 12 deaths, 8 of which happened in children over 1 month of age, a percentage of 10·5 for the latter period. Doubtless a small percentage of this mortality would occur however great the care and knowledge expended, but the majority of these deaths are avoidable.

The remedy is the same as that for any of the other mistakes made in the course of human activities--education : in the homes, by the Health Visitors and others ; in the Maternity and Child Welfare Clinics ; by means of popular lectures, cinematograph or otherwise, and last, but not least, by the everyday examples of those mothers who have learnt, who believe in and who put into practice, the true culture of that young and frail plant—the human baby.

Summing up the Infantile Deaths under the headings of Preventable, Possibly Preventable, and Not Preventable, the following Table attempts to give an approximation of the relative figures.

TABLE 72.

Preventable Causes.		Possibly Preventable.		Not Preventable.	
Diarrhœa and Gastritis, &c.	12	Some Cases of Convulsions, say	1	Premature Births, say 50%	20
Infectious Diseases	15	Some Cases of Wasting, say 25%	6	Congenital Defects	10
Most Cases of Wasting, say 75%	19	Some Cases of Bronchitis and Pneumonia, say 25%	10	Various Causes, say 25%	3
Most Cases of Bronchitis and Pneumonia, say 75%	28	Various Causes, say 25%	3		
Cases of Convulsions, say 75%	3	Premature Births, say 50%	21		
Various Causes, say 50%	5				

TABLE 73.

DEATH RATES UNDER ONE YEAR OF AGE.

CAUSE OF DEATH.	RATES PER 1,000 BIRTHS.												
	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
Small-pox	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0
Chicken-pox	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0
Measles	1·7	5·3	1·9	2·4	4·5	0·0	3·5	1·1	2·7	0·9	0·5	4·2	0·5
Scarlet Fever	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0
Whooping-cough	2·1	8·5	1·4	3·0	3·8	0·5	0·0	3·5	1·8	2·3	2·0	2·1	3·4
Diphtheria and Croup	0·3	0·0	0·0	0·6	0·0	0·0	0·7	0·3	0·0	0·0	0·0	0·0	0·5
Erysipelas	0·7	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0
Tuberculous Meningitis ...	0·0	0·4	0·4	1·8	3·2	1·0	1·0	0·0	0·4	0·4	0·5	0·0	0·5
Abdominal Tuberculosis ...	1·4	2·0	1·4	1·8	2·5	0·5	0·4	1·1	0·4	0·0	0·5	0·5	0·5
Other Tuberculous Diseases...	0·3	0·8	0·0	0·0	0·6	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·5
Meningitis (*not Tuberculous*)...	0·7	0·4	2·4	2·4	1·9	0·0	4·2	0·7	2·3	0·9	1·0	2·1	2·2
Convulsions	9·2	9·8	8·2	12·3	5·1	4·9	4·4	8·3	4·5	4·3	5·0	5·2	2·2
Laryngitis	0·3	0·8	0·4	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0	0·0
Bronchitis	13·5	23·2	13·5	11·0	14·8	11·4	10·2	10·6	5·9	7·1	7·0	12·0	8·6
Pneumonia (*all forms*)	10·3	15·0	14·0	11·0	10·9	10·8	10·2	14·2	12·8	12·4	12·6	13·1	13·2
Diarrhœa	12·1	11·4	5·3	8·0	10·9	5·4	10·2	7·9	3·2	4·3	5·5	4·7	4·0
Enteritis	0·7	5·7	4·8	1·2	3·2	0·0	1·4	4·7	4·1	4·8	0·0	0·5	1·1
Gastritis	0·7	2·0	1·9	0·0	0·0	0·5	1·7	1·1	1·8	0·9	3·0	1·0	1·7
Syphilis	0·3	0·8	0·9	0·6	3·2	0·5	1·7	2·3	0·9	2·8	2·0	2·6	0·0
Rickets	0·7	1·2	0·0	0·6	0·0	1·0	0·0	1·5	0·9	0·4	0·0	0·0	0·0
Suffocation, overlying	1·7	1·2	0·0	0·6	0·0	0·5	0·7	0·0	0·4	0·4	0·0	0·0	0·0
Injury at Birth	1·7	0·8	0·0	0·6	0·0	0·5	1·4	0·3	1·3	0·4	0·0	0·0	0·0
Atelectasis	1·7	2·0	3·3	1·8	2·5	1·6	1·7	2·7	0·4	0·9	0·5	0·5	0·0
Congenital Malformations ...	5·0	6·1	5·8	4·3	6·4	2·7	4·2	3·9	4·5	10·5	3·5	5·7	5·7
Premature Birth	20·7	22·8	30·0	23·9	30·9	26·6	23·7	22·5	25·7	25·3	15·6	20·5	23·5
Atrophy, Debility and Marasmus	22·1	15·0	16·4	12·9	7·9	16·3	18·0	14·2	14·2	10·9	10·6	8·6	14·3
Other causes	7·4	10·6	8·2	9·2	10·3	9·2	9·9	7·1	9·6	9·5	14·1	13·6	6·3

Table 73 affords a comparison in the yearly rates per 1,000 births, over the period 1914—1926, of the various causes of Infant deaths. The outstanding features are: Firstly, the persistent high rate of death from Prematurity, Pneumonia, Bronchitis, and Debility. Secondly, the remarkable reduction in the death-rate from Diarrhœa and Enteritis. Thirdly, the periodic fluctuation in the death-rate from Measles and Whooping Cough, as compared with the innocuousness of Scarlet Fever in babies under one year of age. Fourthly, the reduction in the death-rate from all forms of Tuberculous infections, especially Abdominal Tuberculosis. Efforts to obtain a tubercle free milk supply, and the greater use of dried milks are reflected in this reduction. In recent years, the use of the unsatisfactory term " Convulsions," as a cause of death, has diminished. Convulsions always owe their origin to an underlying cause. The term is one of a symptom, not a disease.

MIDWIVES ACTS, 1902 & 1918.

MIDWIVES & MATERNITY HOMES ACT, 1926.

Section I (1) of the Midwives Act, 1902, states " From and after the first day of April, 1905, any woman who, not being certified under this Act, shall take or use the name of midwife (either alone or in any combination with any word or words), or any name, title or addition, or description implying that she is certified under this Act, or is a person specially qualified to practice midwifery, or is recognised by law as a midwife, shall be liable on summary conviction to a fine not exceeding £5."

Section 1 (2) of the Midwives Act 1902 was amended by the Midwives and Maternity Homes Act, 1926, which came into force on August 4th, 1926. The amendation now reads : " If any person, being either a male person, or a woman not certified under this Act, attends a woman in childbirth otherwise than under the direction and personal supervision of a duly qualified medical practitioner, that person shall, unless he or she satisfies the Court that the attention was given in a case of sudden or urgent necessity, be liable on summary conviction to a fine not exceeding £10."

This amended section tightens up the former provisions. It is now no longer necessary to prove that an uncertified person attended cases in contravention of the provisions, " habitually and for gain." Again the case is to be under the *personal* supervision of a doctor. This necessitates his being present, and lastly, the penalty for failure to observe the requirements has been raised from £5 to £10.

Fifty-four midwives notified the Local Supervising Authority of their intention to practice during 1926 (Sec. 10 Midwives Act 1902). Of these, six removed out of the Borough, and one resigned during the year. There were 47 on the register of midwives at the end of the year, and of these 42 were trained and held the Certificate of the Central Midwives Board, and 5 were *bona-fide* midwives, *i.e.*, were in practice as midwives at the time of the passing of the Midwives Act. The Local Authority do not employ or subsidise any district midwives. Thirty-seven of the above total work on their own account, and 10 are nurses attached to the District Nurses' Home St. Peter's Street.

CONFINEMENTS ATTENDED BY MIDWIVES.

Cases attended by Midwives alone	778
Cases Attended by Midwives, when a Doctor was also engaged	290
Cases attended by Midwives, when a Doctor was summoned	225
TOTAL	1293

The following Table gives details of the reasons for sending for medical help. The rules of the Central Midwives' Board lay down that the Local Supervising Authority must be informed, within 36 hours, by a midwife if she has summoned medical help during pregnancy, in a confinement or within ten days afterwards.

TABLE 74.

FOR COMPLICATIONS DURING PREGNANCY :—

Excessive Vomiting	1
Albuminuria	1
Varicose Veins	1
TOTAL	3

FOR COMPLICATIONS DURING LABOUR :—

A.—Malpresentations—

Breech	6
Extended Breech	1
Hand	1
Cord	1
Foot	4
Transverse	2
Face	5
Occipito-Posterior	8
Placenta Prævia	4
Knee	1
Undiagnosed	7
TOTAL	40

B.—Obstructed Labour—

Impacted Head	2
Rigid Cervix	2
Narrow Passages	1
Rigid Perineum	1
Deformed Pelvis	1
TOTAL	7

C.—Delayed Labour—

Uterine Inertia	6
Prolonged Labour	18
Delayed Labour .. .. (Causes not diagnosed)	38
TOTAL	62

D.—Hæmorrhage—

Antepartum	4
Post Partum	8
Threatened Abortion	2
Total	14

E.—Other Causes—

Retained Membranes	4
Adherent Placenta	10
Retained Placenta	1
Miscarriage	2
Premature Birth	18
Torn Perineum	141
Hysteria	1
Collapse	1
Rash	2
Patients' Request	5
Heart Trouble	1
Vaginal Trouble	2
Bronchitis	1
Irregular Pulse	1
Vomiting	3
Œdema of legs	1
Nerve Trouble	2
Anæmia	1
Total	197

For Complications during the Puerperium :—

High Temperature	14
Subinvolution of Uterus	1
Inflammation of Breast	1
Total	16

For Complications in Respect of the Baby :—

Inflammation of the Eyes	7
Discharge from the Ears	8
Spina Bifida	1
Still Birth	1
Malformation	5
Hæmorrhage from rectum	1
Hæmorrhage from umbilicus	1
Rash	2
Phimosis	1
Pemphigus	1
Pustular Spots on head	1
Blueness of Baby	5
Feebleness of Baby	7
Convulsions	1
Total	42

In accordance with Rule 12a of the Central Midwives' Board, the following midwives' Records of Discontinuance of Breast Feeding, with the reasons for this step, were received :—

No desire on part of mother	3
Retracted Nipples	1
Lack of Breast Milk	2
On Medical Advice	2
Breast Abscess	2
Laziness	1
Total	11

INSPECTION OF MIDWIVES.

The Assistant Medical Officer for Maternity and Child Welfare—Dr. Ella Mackenzie, and the Senior Health Visitor—Miss Lowe, are the inspectors of midwives. Dr. Mackenzie had 46 interviews with midwives at the Town Hall. Miss Lowe paid 224 visits to the homes of midwives. Of these visits 68 proved ineffective, the midwife not being at home. An endeavour is made to visit each midwife every two months.

The cleanliness of the midwives' homes was satisfactory in all cases with the exception of one of the untrained midwives. This person is doing very little practice and is of advanced age ; her house is habitually unsatisfactory.

The condition of the midwives' bags was satisfactory throughout the year, whilst the necessary case records and temperature charts were properly kept.

Twenty-five midwives on the district attempt some kind of ante-natal supervision. The 10 District Nurses do ante-natal work as a routine. Unfortunately the attitude of many of their patients is not helpful. In more than one instance a midwife who conscientiously endeavoured to carry out ante-natal work, lost her client, who went to another midwife, less conscientious. and thereby of less trouble to the patient. This attitude seems incomprehensible to all who know the value of ante-natal supervision, and it can only be put down to ignorance, mingled with superstition. The revised rules of the C.M.B. for 1927 impose an obligation on all certified midwives to take ante-natal clinical details. The nature of the work is, unfortunately, rather elaborate, and requires the taking of measurements, with which only a few midwives are familiar. I am afraid already there are signs that patients are employing " handy women " instead of trained midwives, because they resent such ante-natal procedures. If this develops the new rule will have quite the reverse effect intended. As so frequently happens, what is estimable in theory fails in practice. In all measures dealing with so unstable material as human nature, progression is best attained by allowing the followers to think that they are actually the leaders. The rank and file of mothers are not yet ready for a wholesale application of ante-natal measures. Also measures such as those to be carried out under the new rule are better done by the medical practitioner. If private medical men would insist—as they ought to do in the best interests of their patients—upon ante-natal examinations, the general application of these valuable measures would soon become an accomplished fact. The medical profession needs to exercise greater firmness on this point, if they believe that ante-natal work is of benefit to prospective mothers. At the present lip service far outpaces practice.

Six Maternity Bags were lent out during the year.

One midwife was reprimanded by the Central Midwives' Board. This case was brought by a private practitioner, not the Local Supervising Authority.

Doctors' Accounts Under Sec. 14 (1) of the Midwives Act, 1918.

Eighty-four accounts were received from doctors for services rendered to patients to whom they had been called in an emergency by a qualified midwife.

This compares with 81 in 1925, and 61 in 1924. The total amount of the accounts was £134 4s. 6d. The Sub-Committee assessed the amount recoverable from patients (Sec. 14 (4) Midwives Act, 1918) at £60 17s. 0d., and £41 0s. 9d. was actually paid by patients during the year.

THE MATERNITY AND CHILD WELFARE CLINICS.

There are four Maternity and Child Welfare Centres, at which one session per week is held, and another at which two sessions weekly are held, making a total of six sessions a week. The Centres in 1926 were situated in Princes Street, Copy Nook, Nova Scotia (School Street), Kendal Street, and Griffin (Parochial Hall).

A Doctor attends at each session, together with two Health Visitors, and, as a rule, three to four voluntary workers. The assistance rendered by these ladies is very real, and I would like, on behalf of the staff and of myself, to thank them for the enthusiastic and unstinted service they have given. The quarterly meetings have been continued, at which the Medical Officer of Health meets the superintendents of the voluntary workers and at which matters affecting the work of the Centres are discussed.

Talks are given in alternate weeks to mothers by the Health Visitor in charge. Each Health Visitor is responsible for one Clinic premises, and consequently the same talk is given six times. The Syllabus of Talks was as follows :—

I. Expectant Motherhood. II. Care of the New-Born Infant. III. The Diet of a Nursing Mother. IV. Breast Feeding. V. Artificial Feeding. VI. Weaning. VII. The Hygiene of Infancy. VIII. Baby Clothes. IX. The Development of the Child. X. Feeding from 1—5 Years. XI. Rickets. XII. Common Ailments of Infancy.

TABLE 75.

	Princes Street.	Copy Nook (2 sessions weekly).	School Street.	Kendal Street.	Griffin.	Total, 1926.	Total, 1925.	Total, 1924.	Total, 1923.
Infants :—									
New cases under 1 year	116	246	163	190	156	871	840	927	932
No. of re-attendances..	1368	3253	1711	2238	1933	10503	8756	9173	8820
New cases over 1 year..	58	42	52	58	46	256	234	233	263
No. of re-attendances..	1723	3732	1735	1914	1427	10531	8555	9201	7408
Attendances of Infants	3265	7273	3661	4400	3562	22161	18385	19534	17423
Consultations with Dr.	1063	1926	980	1014	933	5916	5763	6793	5469
Expectant Mothers—									
No. of new cases ..	37	36	26	24	32	155	146	163	125
No. of re-attendances	173	170	84	104	111	642	544	544	394
Total Attendances of Expectant Mothers..	210	206	110	128	143	797	690	707	519
Total Attendances.. ..	3475	7479	3771	4528	3705	22958	19075	20241	17942
Average Attendance per session 1926	71·00	73·43	73·30	88·20	64·28	*467			
1925	60·4	63·7	62·3	75·0	63·1		*389		
1924	53·8	69·7	63·8	82·5	70·6			*410	
1923	51·3	66·3	55·2	66·8	60·8				*366

* Total average attendance *each week* at all the Centres.

In 1926 1,743 children were born, and 871 children under 1 year attended the various Clinics during the year for the first time. Although the two figures are not strictly comparable, it may be taken as a fair estimate that during 1926 approximately 50% of the babies born were taken to one of the Clinics.

The Consultations with the Doctor maintained a good figure. The percentage of the cases seen by a Doctor at each session and for each Clinic is as below :—

Princes' Street	32·50
Copy Nook	23·40
School Street	26·60
Kendal Street	23·04
Griffin	26·19

Three thousand eight hundred and eighty-three more attendances were made in 1926 than in 1925, the figure of 22,958 being the largest yet attained. This is proof of the popularity of the Centres.

The attendance of new cases over one year of age is disappointing, though a small increase of 22 was made on last year's figure. This branch of the work needs extending, but limitations of staff preclude the home visiting necessary to bring this about.

The number of prospective mothers attending might be increased, though marked increments are not to be expected, as this work is uncertain, and Health Visitors have to rely on information obtained during the course of their routine visits under the Notification of Births Act.

Kendal Street Centre again showed the greatest number of attendances and the largest number of new cases under one year of age ; Prince's Street, the most new expectant mothers, and, with Kendal Street, the greatest number of new cases over one year of age. Prince's Street Centre also showed the highest percentage Consultations with the Doctor. All the Clinics gave an increased average attendance per session, the largest being one of 13·2, at Kendal Street. At this Centre there were occasions when the numbers attending became unwieldy, and so caused temporary confusion.

The Table below is intended to show the deaths of babies who at one time or another during their first year have attended a Clinic, as compared with deaths among those who have never attended. If a baby only attended once at a Clinic it is included in the Clinic babies.

TABLE 76.

Area	Deaths	Attend'd a Clinic		Attendance at Birth			FullTime Baby		Births during same period.	Deaths in Institution		
		Yes	No	Doctor	Mid-wife	Doctor & Mid-wife	Yes	No		Q'eens Park	Royal Infir-mary	Spring field
District I.	38	7	31	2	14	22	28	10	350	3	1	..
,, II.	27	2	25	2	15	10	16	11	309	1	..	2
, III.	25	3	22	8	10	7	21	4	298	1	2	..
,, IV.	19	1	18	5	7	7	15	4	197	3	1	..
,, V.	16	4	12	4	8	4	12	4	305	..	2	1
,, VI.	31	4	27	12	16	3	19	12	343	1	2	6
	156	21	135	33	70	53	111	45	1802	9	8	9

The Infantile Mortality among the 871 babies under one year who attended the Clinics was 24 per 1,000 births. Among the 872 babies who did not attend the mortality was 155 per 1,000 births. Of the total deaths, 13·6% occurred in Clinic babies, but the percentage of all babies born who attended was 50. There is, therefore, a definitely lower rate of mortality among babies whose mothers bring them to the Clinic than among the remainder. In 1925 the same facts were to be noted. The infantile mortality in " Clinic " babies was 37 per 1,000 births, whilst in non-Clinic babies it was 146, whilst of the total deaths 16·6% occurred in Clinic babies, but the percentage of all babies born who attended was 44. These figures supply a vindication of the establishment and, if necessary, the expansion of Welfare Centres, if such proof is any longer necessary and it is not already accepted as an uncontrovertible fact.

MILK (MOTHERS AND CHILDREN) ORDER.

Table 77 gives the number of families who were in receipt of assistance under the provisions of the above-named Order during the year.

TABLE 77.

Price.	No. on Jan. 1st, 1926.	New Cases during Year.	Cases Discontinued.	No. on Dec. 31st, 1926.
Free	97	255	169	183
Quarter Price ..	16	34	41	9
Half-Price	4	27	28	3
TOTAL	117	316	238	195

For former years the corresponding figures (totals) are :—

1921	*58	606	576	†88
1922	*88	410	404	†94
1923	*94	433	363	†164
1924	*164	494	528	†130
1925	*130	242	255	†117

* Beginning of Year. † End of Year.

In cases where there has been a change from free milk to milk at a fractional cost, or *vice versa*, it has been counted as a new case. A considerable increase has occurred in the number of new cases. Seventy-four more new cases came under the provisions of the Order than in 1925, whilst at the end of the year the unprecedented number of 195 cases were having assistance. The effects of the coal dispute are to be seen in this figure. When trade is good, the number of mothers coming under the Milk Order diminishes and per contra, if trade is uncertain or bad, it increases.

Formerly, families in receipt of Poor Law relief were precluded from obtaining food at the Centres, and consequently some of the mothers ceased attending. A different arrangement was come to with the Guardians whereby babies' food was not included in the free food parcel allowed, but mothers were able to obtain it free at the Centre. In this way a watch was kept upon the progress of the babies.

The amounts—in pound weights—dispensed and the cost thereof for each month of the year is shown in the Table below.

TABLE 78.

Dried Milk—Pounds Weight.

Month	Given Free	One Quarter Price	One Half Price	Cost Price	Total Weight in lbs.	Nett Cost		
						£	s.	d.
January	646	86	15	934	1681	53	0	0
February	658	74	13	1011	1756	54	4	0
March	881	80	29	1244	2234	72	0	9
April	666	82	32	1090	1870	55	18	3
May	844	88	24	1080	2036	69	3	6
June	864	70	33	1240	2207	69	9	6
July	1009	38	34	1440	2521	78	18	10½
August	989	66	27	1319	2401	79	1	3
September	1111	60	29	1332	2532	86	15	3
October..	1131	60	20	1188	2399	89	5	3
November	1297	69	15	1160	2541	101	17	4½
December	1315	67	4	1261	2647	102	14	4½
	11411	840	275	14299	26825	912	8	4½

Wet milk has not been supplied. It is a necessity for those supplied with dried milk to attend weekly at the Centres, and so the babies are regularly weighed and examined. When wet milk is ordered, say for a period of three weeks or a month, the tendency is for some of the mothers only to attend when the time for renewal of the milk certificate expires. This is neither the spirit nor the function of Child Welfare Centres.

For past years the cost of supply of milk to expectant, and nursing, mothers and young children has been :—1921, £791 : 1922, £514 ; 1923, £780 ; 1924, £850 ; 1925, £729. The nett cost in 1926, therefore, rose £183. There were no signs when the year closed that any diminution in the cost was taking place. December was the heaviest month, the expenditure being nearly double that in January.

Most dried milk was supplied in the last four months of the year ; the least in January. Most free milk was given in November and December. The heaviest cost was in November and December also. The proportion of the weight of free dried milk to the total weight was as 1 : 2·4, or 42·5%. The corresponding figures for 1925 were 1 : 2·2 and 46·1%.

TABLE 79.

THE WORK OF THE HEALTH VISITORS.

HOME VISITING.

	District I.	*District* II.	*District* III.	*District* IV.	*District* V.	*District* VI.	*Totals*
Visits to Expectant Mothers—							
First Visits	62	75	44	55	52	91	379
Re-visits	76	64	58	86	55	138	477
Ineffective Visits	19	9	18	11	11	12	80
Infants under 1 year—							
First Visits	295	260	286	211	248	385	1685
Re-visits	1301	1026	1379	891	1197	1513	7307
Ineffective Visits	96	146	200	116	255	48	861
Infants aged 1 year—							
Re-visits	741	660	733	862	763	863	4622
Special Visits	21	5	11	—	5	18	60
Ineffective Visits	87	52	113	56	97	22	427
Children 2—5 years	792	1000	459	541	473	824	4089
Ineffective	98	33	61	32	49	44	317
Ophthalmia Neonatorum—							
First Visits	2	2	3	1	7	—	15
Re-visits	4	5	18	1	11	1	40
Diarrhœa—							
First Visits	2	—	5	2	..	4	13
Re-visits	1	1	5	1	..	2	10
Stillbirths	15	14	13	4	12	12	70
Infectious Diseases	..	..	..	..	..	8	8
Doctors' Accounts	10	10	9	10	9	22	70
Milk (Mothers & Children Order) Visits	1	16	8	2	2	10	39
Midwives—							
Routine	141	..	..	..	..	..	141
Special	9	..	..	..	..	..	9
Ineffective	63	..	..	..	..	..	63
Puerperal Fever Visits	10	1	1	..	..	4	16
Houses where deaths of infants occurred	21	11	16	20	6	17	91
Miscellaneous Visits	..	22	1	..	7	61	91
TOTALS .. 1926	3867	3412	3441	2902	3259	4099	20980
1925	2585	4014	3025	2230	2592	3840	18286

In District No. 11 there was no Health Visitor during July and August. The figures for 1925, in Districts I and V were abnormally low owing to the absence of the respective Health Visitors.

TABLE 80.

CLINIC SESSIONS ATTENDED.

	District I.	*District* II.	*District* III.	*District* IV.	*District* V.	*District* VI.	*Totals.*
Maternity & Child Welfare Clinics	101	72	109	90	96	99	567
Ante-Natal Clinics	26	20	19	92	16	13	186
Special V.D. Clinics	..	6	..	44	12	25	87
Dr. Briggs' Orthopædic Clinic ..	4	..	7	4	3	..	18
Dental and other Clinics	..	2	..	..	4	..	6
TOTALS	131	100	135	230	131	137	864
The Total Houses visited were..	3080	2712	3304	2051	2756	3086	16989
The Total Persons visited were..	3665	3415	3466	2898	3250	4033	20727

The Health Visitors gave, in addition to the routine fortnightly talks to mothers attending the Welfare Centres, 28 addresses to students at the Domestic Science School. I have already given the syllabus of the fortnightly talks at Centres (*See page* 146).

There is manifest an increase of 1774 persons visited as compared with the previous year.

It will be gathered that for the purposes of Maternity and Child Welfare the Town is divided into six Districts. They are as follows :—

DISTRICT I.

Areas.—Higher Audley District : Boundary, Higher Audley Bridge, Bennington Street, Queen's Road to Shadsworth Road, Higher Audley Street, Lambeth Street, Audley Range to Accrington Road.

Higher Eanam, Bottomgate, Furthergate, Accrington Road to Borough Boundary beyond Intack, Shadsworth Road on the right, Peronne Crescent on the left.

Wellington Inn to Boundary, Whitebirk, including district bounded by the Canal and Railway, along Stanley Street to the Railway Bridge in Stanley Street.

Wards.—Parts of St. Stephen's, Trinity, St. Mary's, St. Matthew's, St. Thomas's.

DISTRICT II.

Area.—Bridge Street following Railway line as boundary to Mill Race across to Catterall Street, Livesey Branch Road to Borough Boundary at Cherry Tree. Also Heyes Lane to Borough Boundary. From Cherry Tree boundary line of Redlam, Bank Top, Whalley Banks, King Street, Church Street to Railway Station.

Wards.—Parts of St. Peter's, St. Luke's, St. Mark's, St. Andrew's.

DISTRICT III.

Area.—Darwen Street Bridge along Bolton Road bounded by the Railway to Hollin Street, Peel Street to the Mill Race, across to Catterall Street (Livesey Branch Road), Bolton Road, Ewood, to Boundary at Darwen, along Sandy Lane, all Lower Darwen and Guide to the Boundaries at Belthorn and School Lane, Haslingden Road, Bennington Street, Lower Audley Street to Darwen Street Bridge.

Wards.—Parts of St. Mary's, St. Thomas's, St. Andrew's, St. Luke's, St. Matthew's, and the whole of Park.

DISTRICT IV.

Area.—Salford to Eanam Bridge (Canal), Forrest Street to Appleby Street, Stanley Street to Railway Bridge, Moss Street, Penny Street, Larkhill (right side), Whalley Old Road, Ainsworth Street to Regent Street, Railway Road to Railway Station, to Foundry Hill.

Wards.—Parts of St. Mary's, St. Stephen's, Trinity.

DISTRICT V.

Area.—Victoria Street and Regent Street, left of Larkhill, all Streets left of Whalley old Road, along Bank Hey Road to Roe Lee and Wilpshire boundary.

Arterial Road to Seven Acre Brook, Pleckgate Road to Four Lanes End.

Town Hall, Limbrick, east of East Park Road to Four Lanes End.

Wards.—Parts of St. Stephen's, St. Michael's, St. John's (all), St. Mary's, St. Silas's.

District VI.

Area.—Boundary, Seven Acre Brook, Four Lanes End, Arterial Road, Revidge Road, Billinge Side, to Yew Tree.

Buncer Lane, Witton Park, Redlam, Bank Top, Whalley Banks, King Street, Lord Street West, Nab Lane, Northgate, Preston New Road.

Wards.—St. Silas's, St. Paul's, parts of St. Peter's, St. Luke's, St. Mark's, St. Michael's.

CARE OF ILLEGITIMATE CHILDREN.

Close co-operation has been maintained with the Manchester Diocesan Association of Preventive and Rescue Work, who have in Blackburn the "Viewfield Hostel." The babies, with their mothers, come from all parts of the Diocese. The unmarried mothers, with their babies, are admitted to the Hostel as soon after confinement as possible. During the lactation period the mother is employed in household work at the Hostel. After the child is weaned, daily work in the town is found for the mother until the child is eighteen months old.

I am indebted to the Hon. Secretary, Miss A. M. Duckworth, for the figures given below of the work done during the year :—

	Mothers.	*Babies.*	*Boarders.*
Number of Beds	12	12	4
Number of Cases Admitted, 1926	10	10	..
Number in Hostel, Jan. 1st, 1927	12	12	2
Number returned to relatives and friends	4	..	..
Number of Mothers sent to situations	4	..	..
Babies kept as temporary boarders	..	2	3
Babies taken back as boarders	..	..	..
Baby boarders discharged	..	..	5

At the end of the year there were 6 babies under one year. Of these, 1 was on four-hourly breast feeds. There were not any additions nor new work during the year.

DENTAL TREATMENT OF MATERNITY AND CHILD WELFARE PATIENTS, 1926.

Miss E. Thomson, the School Dental Surgeon, in addition to the time spent in school dentistry, and in the treatment of Tuberculous patients urgently needing attention, did the following work on cases referred to her from the Maternity and Child Welfare Department :—

	1926	1925
Number of Sessions held	12	12
Number of Patients—Mothers	3	2
Children	91	82
Number of Visits paid to Dental Clinic	101	87
Permanent Teeth extracted	1	4
Temporary Teeth Extracted	65	82
Temporary Teeth filled	2	3
Other Operations	21	32

A peculiar prejudice exists among expectant mothers to any dental treatment during pregnancy. There is not any scientific reason for this hesitancy and it is difficult to imagine anything but good resulting from the removal of septic foci in the mouth. This erroneous attitude is hard to overcome and repeated admonition, explanation and education will be required before the amount of dental treatment necessary in these women can be carried out.

THE PRE-SCHOOL CHILD.

CAUSES OF DEATH IN CHILDREN FROM 1 TO 5 YEARS OF AGE.

	1926	1925
Respiratory Diseases	36	37
Infectious Diseases (Non-Tubercular)	22	34
Tuberculosis—all forms	3	4
Digestive System Diseases	3	3
Other Causes	15	25
	79	103

TABLE 81.

Year	Population.	Births	Deaths under 1 year	% of Total Deaths	Deaths 1—5 years	% of Total Deaths	Deaths over 5.	% of Total Deaths	Total Deaths
1920	127700	2827	311	17·3	63	3·5	1412	79·1	1786
1921	129400	2528	276	16·7	66	4·0	1313	79·3	1655
1922	129376	2177	215	11·6	118	6·4	1510	81·9	1843
1923	129000	2094	210	12·1	81	4·6	1445	83·2	1736
1924	129000	1980	167	9·2	90	4·9	1553	85·8	1810
1925	126900	1902	186	10·5	103	5·8	1478	83·6	1767
1926	124400	1743	156	9·6	79	4·9	1381	85·5	1616

As a result of the medical inspection of the Entrant group of School Children, it is found that a considerable number of children develop various maladies between the time of cessation of attendance at Welfare Centres and the time of entering School. Enlarged Tonsils and Adenoids and Chronic Otorrhœa are among the commonest ailments discovered. Again, a perusal of Table 15 (Infectious Diseases Section) shows that a considerable proportion of the notifiable infectious diseases attack children between these ages (27% for Scarlet Fever and 26% for Diphtheria). Table 8 (Vital Statistics Section) emphasises still more the necessity for careful supervision during this period of life. All the deaths from Whooping Cough (20) 73% of the deaths from Measles, and the only death from Scarlet Fever occurred during this age period.

Although the primary object of Maternity and Child Welfare Clinics is to deal with infants up to 18 months or two years of age, an endeavour is made to keep supervision over the older children until school age is reached.

The Table given above shows that, although there has been a distinct fall since 1920 in the Infantile Mortality rate, the death-rate in the group 1—5 years shows no such tendency.

INSPECTION AND SUPERVISION OF FOOD.

Clean Food.

The object of Health activities is—apart from remedying outstanding insanitary conditions, and in minimising the evils wrought by such agencies—to bring about the growth of a Sanitary conscience. In many respects this has already been done, but there is a curious apathy in relation to food cleanliness. This country was the pioneer in the mechanical and the personal aspects of public health progress, but it lags behind many other countries in its attitude towards clean food.

The number of Grade A and Certified (T.T.) producers and distributors is steadily increasing. There is still sold, however, an enormous volume of ungraded milk of very variable standards of cleanliness. It would, perhaps, be better to grade farms rather than milk, and to allow milk to be sold at a higher price from the most highly-graded farms. There are premises on which it is practically impossible to produce milk of reasonable cleanliness. The Veterinary Inspector and myself have, during the year, made a point of visiting farms from which milk is retailed in Blackburn. Our visits have resulted in a marked improvement in many cases.

As some of the farms sending milk into Blackburn are outside the Borough, our visits are made in friendly conjunction with the representatives of the Local Authorities concerned. This co-operation is most helpful, and our Department appreciates very fully the assistance rendered.

Milk may be contaminated at its source—during milking: during transit to the distributor, during distribution, and in the homes of the recipients. It is a fluid very absorbent of odours of all kinds, and it is also a peculiarly good medium for bacterial growth. Contaminations in the home are under the control of the drinker of the milk. Contamination upon milk premises is not easily controlled under the present powers.

The principle of selling milk from many small shops dealing in all kinds of goods is wrong. If all milk were bottled on approved bottling premises and sold in sealed bottles, the objection perhaps would not be so great.

Special attention has been paid to fish during the year. In conjunction with Mr. Goodman, I have paid visits to the wholesale fish market, and representations have been made to the railway company on certain aspects. Improvements have been effected, and the traffic in fish, particularly between Fleetwood and Blackburn, is satisfactory. A good standard of cleanliness is maintained, whilst the quality of the fish is high.

The wholesale dealers in the fish market have co-operated with the Health Department in a very commendable fashion, and the standard of cleanliness observed by them is worthy of emulation by all persons engaged in handling and preparing food for public consumption.

Shell Fish. A strict watch has been maintained upon consignments of Shell Fish coming into the Borough. Five samples have been submitted to bacteriological examinations in the Public Health Laboratory, Manchester.

The areas from which samples have been taken and submitted to Bacteriological Analysis have been: Piel, Barrow-in-Furness; Badger Butts, Little Neston; Park Gate, Cheshire; Glen Cair, Kippford.

The cleanest sample was one of mussels from Badger Butts, but even this was not so clean as to be absolutely safe for human consumption.

The general public do not appear to comprehend the danger of eating shell fish from sources contaminated with human sewage. Unfortunately molluscs showing the fattest and finest condition are the most likely to be contaminated, in the same way as well-manured plants are the biggest. The mollusc, in contradistinction to vegetables, harbours within itself unchanged the intestinal organisms of human beings. For example, if excreta from a case of Typhoid Fever reach, even in a dilute form, one of the molluscs, the organisms of Typhoid are swallowed by it and retained so that, when consumed by another human being, and particularly so if it is not properly cooked, the typhoid bacillus is handed on, and another case of the illness arises.

Shell fish are either eaten raw or very imperfectly cooked, and herein lies their danger.

If placed in clean, running water and left therein for a few days, shell fish will rid themselves of any traces of sewage contamination. It does not seem a very exorbitant demand to ask that proper tanks be installed at points so that shell fish from the various areas can be sent for cleansing before they are put on the market. As at present carried on, nobody who realises the meaning of clean food, could possibly recommend shell fish for eating, and I venture to think that did the buying public fully realise the conditions, the consumption of this commodity would fall considerably.

The following notice was issued to fishermen of one area from which shell fish had been sent into Blackburn, but owing to unsatisfactory cleanliness supplies had been suspended. Co-operation between the Officer of the Ministry of Agriculture and ourselves led to the issue of the notice and up to the end of the year the fishermen had abided by their obligations.

NOTICE TO FISHERMEN.

As a result of negotiations between the Medical Officer of Health of Blackburn and myself, the Health Authorities of Blackburn have agreed to re-open the Blackburn Market to cockles only, from the Flookburgh District, subject to the following conditions :—

(1) Cockles will only be accepted from *bona-fide* whole time fishermen, resident in Cark or Flookburgh, and whose names appear on a list, which has been prepared by myself, and of which a copy will be retained by the Blackburn Authorities.

(2) Every bag of cockles must have a printed label attached, which will bear the full names (christian and surname) of the sender, together with the date on which the cockles were gathered.

(3) All cockles so consigned must have all adherent mud and dirt washed off, and must be sent in clean bags.

(4) All fishermen must undertake never to gather cockles from any area which might be in the least degree exposed to any pollution.

(5) It is to be understood that the Blackburn Authorities will continue to take bacteriological analyses of the cockles from time to time, and should it be found that any samples are polluted, the whole supply into Blackburn may be stopped at once.

I ask all fishermen concerned to help themselves by loyally carrying out the above simple conditions ; if they do so, I am hopeful that the Blackburn Market will be restored to them indefinitely.

E. C. Collard, *Commander, R.N. (ret.)*,

Fisheries Office,
Fleetwood,
1*st March*, 1926.

District Sea Fishery Officer,
Ministry of Agriculture & Fisheries,
North-West Area.

The Bacteriological Examination of Milk.

A hundred and fourteen samples were submitted to the Bacteriologist, Public Health Laboratories, Liverpool. The following is a summary of his findings :—

Bacillus Coli Content—

Not found in 1 cubic centimetre	37
Found in 1 c.c. only	20
,, 0·1 c.c.	18
,, 0·01 c.c.	39

Presence of Tubercle Bacilli.—Milk Samples taken in course of delivery :—One hundred and eighteen samples taken were submitted to inoculation tests for Tubercle bacilli in the University Laboratory, Liverpool. Of this number 4 were found to contain the organisms, in other words, living Tubercle bacilli were being infested by the customers of four of the milkmen from whose milk kits samples were taken. This gives a percentage of milks sold in Blackburn and found to contain living Tubercle bacilli as 3·4%. Tubercle bacilli in a viable state were absent in 102 samples, whilst in 12 samples the guinea pigs died before a result could be obtained.

The presence of Bacillus Coli, or a member of its group, is an indication of manurial contamination of the milk. Very rarely are these organisms excreted in milk, and then never in a healthy condition of the udder. The above results showed 32·4% clean, 33·3% with manurial contamination, and 34·2% grossly contaminated.

VETERINARY INSPECTOR'S REPORT.

To the Medical Officer of Health, Blackburn.

I have pleasure in submitting the following report for the year 1926 :—

Meat Inspection. It may now be said that practically all the animals slaughtered for human food in Blackburn are slaughtered at the Public Abattoir, as there is only one private slaughterhouse in existence, and that belongs to a firm whose main supply comes from the Abattoir.

The number of animals slaughtered was 91,616, an increase of 1,310 over the number in 1925.

There are certain things in meat inspection which are forced to our notice year after year. The prevalence of Tuberculosis is always a disturbing factor. The number of susceptible animals (cattle, calves and pigs) affected with Tuberculosis during 1926 was 367, or 2·15% of those slaughtered. Corresponding percentages in 1925 were 1·83 ; in 1924, 1·87 ; and in 1923, 1·64.

The number of carcases in which the disease was so advanced as to necessitate total condemnation was 107, as compared with 69 in 1925, 85 in 1924, and 54 in 1923. In cattle, particularly, Tuberculosis accounts for a large proportion of the total condemnations. In 1926 only 15 carcases were condemned for diseases other than Tuberculosis, and most of these were from emergency slaughtered animals.

Another parasitic affection of cattle and sheep is responsible for the condemnation of a large amount of what would otherwise be good food material, namely, the liver fluke. Out of 2,801 livers condemned as being unfit for human food, 2,335 were affected with this condition.

The total loss to the country due to this parasite must be very heavy, as, in addition to the loss of livers, many animals never reach the slaughterhouse, but die through emaciation caused by this parasite.

Visits were regularly made during the year to butchers' and other meat shops, food-preparing premises, wholesale and retail fish markets,and meat market.

TABLE 82.

NUMBER OF ANIMALS SLAUGHTERED AT THE PUBLIC ABATTOIR.

1926.	Beasts	Sheep	Calves	Pigs	Goats	Total
January	865	5147	143	307	1	6463
February	828	5289	152	422	..	6691
March	828	6135	162	399	..	7524
April	1004	6416	322	370	..	8112
May	773	5153	121	229	..	6276
June	660	5685	85	137	..	6567
July	739	7485	83	132	..	8439
August	741	6742	152	180	..	7815
September	669	6379	122	236	..	7406
October..	1127	7826	261	565	..	9779
November	920	5638	212	555	..	7325
December	1060	6654	177	1328	..	9219
TOTAL	10214	74549	1992	4860	1	91616

	Beasts.	*Sheep.*	*Calves.*	*Pigs.*	*Goats.*	*Total.*
1920	8822	39345	2420	4112	..	54699
1921	8398	65717	2318	5076	..	81509
1922	10565	85049	2599	4409	..	102622
1923	10644	77050	3420	4522	..	95636
1924	11380	82977	2645	4503	..	101505
1925	11146	72107	2409	4643	..	90306
1926	10214	74549	1992	4860	1	91616

NUMBER OF CARCASES AND PORTIONS OF CARCASES BROUGHT TO THE ABATTOIR.

TABLE 83.

1926.	CARCASES.			BEEF		
	Beef	Mutton	Pork	Hind Qrs.	Buttocks	Fore Qrs.
January	11	155	61	..	..	..
February	13½	90	52	..	..	..
March	10	118	55	1	..	1
April	12	154	50	33	..	1
May	15	226	58	..	..	..
June	15	78	29	1	..	1
July	13	84	28	1	3	1
August	10	50	25	..	3	..
September	50	44	26	..	..	..
October..	18	59	60	1	..	1
November	3	33	75	..	..	..
December	8	31	167	..	..	..
TOTALS .	178½	1122	686	37	6	5

Cases of Kidneys.	*Pork.*	*Lengths of Pork.*	*Tins of Meat.*
142	27	739	..

TABLE 84.

TUBERCULOUS CARCASES EXAMINED AND REJECTED.

1926	Cows		Heifers		Bulls		Bullocks		Calves		Sheep		Pigs		Totals	
	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected
January	12	5	3	..	2	1	6	1	..	..	..	..	12	..	35	7
February..	13	5	1	..	1	..	2	..	..	..	..	..	4	1	21	6
March	21	8	..	..	2	..	3	..	..	..	..	..	10	..	36	8
April	10	5	..	..	1	..	5	1	..	..	..	..	8	2	24	8
May	24	12	..	..	1	..	..	..	..	..	..	..	3	1	28	13
June	12	9	1	..	4	1	3	2	1	1	..	..	1	..	22	13
July	10	2	..	..	5	..	1	..	..	..	..	..	2	..	18	2
August	19	6	1	..	3	..	4	..	..	..	..	..	7	1	34	7
September	13	2	2	..	..	..	5	1	..	..	..	..	9	2	29	5
October	16	7	..	..	2	..	4	1	1	1	..	..	9	..	32	9
November	20	7	1	..	1	..	6	4	..	..	..	..	9	3	37	14
December	14	8	1	1	1	..	2	..	..	..	..	..	33	6	51	15
TOTALS	184	76	10	1	23	2	41	10	2	2	..	..	107	16	367	107

TABLE 85.

TUBERCULOSIS IN THE ANIMALS SLAUGHTERED.

Kind of Animal.	Number Slaughtered.	Of which were Tuberculous.	Totally Rejected	Extent of the Tubercular Process in Partially Rejected Carcases.														
					Thorax.			Abdomen.										
				Heads	Lungs	Heart and Pericardium	Serous Membranes	Livers	Stomachs	Spleens	Kidneys	Intestines	Uteri	Serous Membranes	Bones	Testicles	Udders	Parts of Carcases in lbs.
Cows	1303	184	76	72	107	2	75	9	23	—	—	—	—	15	—	—	32	5613
Heifers	1173	10	1	4	9	—	9	1	1	—	—	—	—	1	—	—	—	160
Bulls	1096	23	2	12	19	—	11	1	3	—	—	—	—	1	—	—	—	560
Bullocks	6636	41	10	19	30	—	12	1	3	—	—	—	—	1	—	—	—	614
Calves	1992	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pigs	4860	107	16	91	91	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTALS	17060	367	107	198	256	2	107	12	30	—	—	—	—	18	—	—	32	6947

TUBERCULOSIS IN THE ANIMALS SLAUGHTERED.

One hundred and seven whole carcases were rejected on account of Tuberculosis, in 1926. Among parts of carcases rejected the lungs were the most frequently implicated, and then the serous membranes, such as the pleura and peritoneum. The absence of any Tuberculosis in the kidneys is interesting. The liver was also rarely affected.

The incidence of Tuberculosis is greatest in cows and pigs. In pigs the commonest site of the disease is in the neck glands and the lungs. The frequency of attack in the neck glands has an important relation to the quality of the milk supply in the districts in which the pigs were reared or fattened.

TABLE 86.

DISEASED CARCASES EXAMINED, REJECTED AND DESTROYED FOR DISEASES, ETC., OTHER THAN TUBERCULOSIS.

CARCASES.

BEEF.		MUTTON.		VEAL.		PORK.	
DISEASE.	No.	DISEASE.	No.	DISEASE.	No.	DISEASE.	No.
Red Water	1	Peritonitis	1	Joint ill	40	Pneumonia	2
Gangrene	1	Asphyxia	24	Jaundice	1	Asphyxia	2
Septicæmia	4	Œdematous	37	Congested	6	Congested	2
Œdematous	3	Nephritis	9	Immature	19	Œdematous	1
Pyæmia	1	Parasitic	1	Œdematous	5	Jaundice	1
Staggers	1	Congested	35	Enteritis	1	Bruised	1
Asphyxia	1	Difficulty in Parturition.	1	Peritonitis	1	Peritonitis	2
Pneumonia	2	Unsound	7	Nephritis	2	Pyæmia	1
Septic Metritis	1	Arthritis	5	Septicæmia	1	Septicæmia	1
		Sarcosporidiosis	1	Pyæmia	2		
		Lymphadenitis	1	Bruised	1		
		Bruised	3	Scour	2		
		Pyæmia	1	Unsound	1		
	15		126		82		13

TABLE 87.

ORGANS AND PARTS OF CARCASES EXAMINED, REJECTED AND DESTROYED, FOR DISEASES OTHER THAN TUBERCULOSIS.

Disease or Condition	Diaphragm	Tongues	Heads	Lungs	Hearts	Livers	Stomachs	Udders	Intestines	Kidneys	Tails	Lbs. of Meat
Fluke	..	...	...	3	...	2335	...	...	...	...	...	...
Cirrhosis	...	...	...	...	...	233	...	...	...	...	...	...
Angioma	...	...	...	...	...	86	...	...	...	...	...	...
Cysts	...	...	...	...	...	...	...	...	...	...	...	...
Unsound	...	17	...	63	6	105	9	24	...	...	...	1439½
Abscesses	...	...	...	...	...	16	3	...	...	...	...	...
Actinomycosis ..	...	...	5	...	...	...	...	...	...	...	...	...
Mastitis	...	...	...	...	...	...	...	108	...	...	...	...
Parasitic	...	...	...	36	...	25	...	...	4	1	...	...
Nephritis	...	...	...	...	...	...	...	...	...	9	...	...
Bruised	...	...	...	...	...	...	...	...	...	...	...	1367
Congested	...	...	...	1	...	...	...	...	...	...	...	...
Pericarditis ..	...	...	...	...	8	...	...	...	...	...	...	...
Dropsical	...	...	...	...	...	...	...	...	1	...	...	...
Pneumonia ..	...	...	...	1	...	...	...	...	...	...	...	...
Necrosis	...	...	...	...	...	1	...	...	...	...	...	...
TOTAL	—	17	5	104	14	2801	12	132	5	10	—	2806½

TABLE 88.

FISH, RABBITS, ETC., EXAMINED, REJECTED AND DESTROYED.

Fish														
Trout	Bags Prawns	Shrimps Quarts	Shrimps Pots	Boxes	Barrels	Bags	Lbs.	Crabs	Tins of Fish	Rabbits	Tins of Meat	Fowl	Turkeys	Cases Kidneys
13	20	7	6	340	2½	16½	769	30	2	1167	4	12	4	2

NUMBER OF VISITS TO INSPECT FOOD.

Fish Shops	797
Provision Shops	760
Butchers' Shops	2000
Private Slaughterhouses	29
Meat Market	182
Fish Market	277
Railway Station	285
	4330

TABLE 89.

CARCASES, ETC., SENT FOR UTILIZATION.

	Tons.	*Cwts.*	*Qrs.*
January	7	8	2
February	5	4	0
March	8	10	0
April	6	4	0
May	5	16	0
June	5	9	1
July	3	16	3
August	5	10	2
September..	3	9	0
October	8	11	2
November..	9	2	0
December	8	5	0
TOTAL	77	6	2

MILK, DAIRIES, COWS AND COWSHEDS' INSPECTIONS.

The fifth annual Clean Milk Competition was held from January to March, 1926.

There were six entrants to the competition proper, and a seventh allowed his name to be included, but did not wish, owing to family illness, to compete officially.

The average bacterial counts reached a much lower level than in previous competitions, and the general condition of the cows, buildings and utensils impressed the judges very favourably.

One of the entrants had previously been arraigned for dirty milk ; he entered the competition and, in spite of a most unfavourable environment, made a good showing, and easily maintained the Grade A standard of cleanliness.

After careful consideration the judges decided to award the "Redmayne" Cup to Mr. Richard Thistlethwaite, of Little Bencock Farm.

His record was very satisfactory in every branch, and was all the more commendable in that his outfit was of a simple and inexpensive character.

Certificates of merit were awarded to Messrs. R. Kinder, Beardwood Tenement Farm ; T. Holgate Cuncliffe Moss, Ramsgreave ; R. Thistlethwaite, Hordens Farm, Livesey ; R. Platt, Dutton Hall Farm, Longridge ; all of whom made a satisfactory effort.

In addition, the judges recommended that a letter of commendation be sent to Mr. C. Brocklehurst, Roberts House Farm, Osbaldeston, for the successful effort he made to produce clean milk under unfavourable conditions.

A small brochure was issued by the Publicity Committee on Health, on the Competition, a copy of which was distributed to every milk producer sending milk into or retailing milk within the Borough.

Farms Visited.

	Farms	Cowsheds	Cows
January	3	7	74
February	8	18	232
March	20	33	391
April	12	24	281
May	41	61	675
June	5	11	138
July	11	22	256
August	30	50	555
September	15	25	284
October	16	29	360
November	6	9	93
December	13	22	278
	180	311	3617

Certified Milk. The number of farms holding the certificate of the Ministry of Health, and supplying Certified Milk to Blackburn, is three. One of these farms is near to the town, so that newer milk can be delivered than from the other two. In the near future it is probable that there will be a further local supply. The price ranges from 7½d. to 6d. per pint.

Grade " A " Milk. There are now nine farms in the district where Grade " A " milk is produced ; three of these are in the Borough and six in the County area.

The price charged is 3½d. and 4d. per pint.

An unfortunate sequel to the increased demand for " bottled milk " is the indiscriminate bottling of milk by retailers of ordinary milk.

No one would object to a revolution in the present method of distribution of milk ; bottling at the place of production would certainly be a great improvement on the present general method ; but it must be accompanied by an all round improvement in conditions.

Milk sold in bottles should certainly conform to a bacterial standard comparable with that of designated milks.

Farm and Dairy Cattle Inspection. During the year I paid 180 visits to farms, inspected 311 cowsheds, and examined the udders of 3,617 cows.

Seven cows on six farms were found to be affected with tuberculosis of the udder ; six of these cases occurred on five farms in the Borough, and one case at a farm outside the Borough from which milk was being supplied to Blackburn.

Two of the above cases were reported by the owners ; three were discovered when making routine examinations of the herds ; one was discovered at a farm from which a case had been reported by the owner ; and one at a farm from which tubercular milk had been sent to Blackburn.

All the cows were slaughtered, and on post mortem examination, five were found to be affected with Tuberculosis in an advanced degree, and in the remaining two the disease was localised.

Four cows were suffering from Mastitis, but the milk was not sold for human food.

Twenty cows showing clinical evidence of Tuberculosis were slaughtered, and on post mortem examination, were found to be affected with Tuberculosis in an advanced degree.

Bacteriological Examination of Milk for Tubercle Bacilli. During the year 130 samples of milk were collected and examined for the presence of tubercle bacilli; 127 of these were submitted to Professor Beattie, Liverpool University, for the biological test; the remaining three were examined by me microscopically.

The samples were made up as follows: 118 mixed samples were taken in the course of delivery; 10 special samples were taken direct from individual cows showing some abnormality of the udder, and 2 control samples taken at farms to control the clinical examination of the herd.

Of the 118 mixed samples taken, 5 contained tubercle bacilli; 101 were negative, and in 12 cases the experimental animals died before a definite diagnosis could be made.

Of the 10 special samples, 6 were positive and four negative. The two control samples were both negative.

The five farms from which milk containing tubercle bacilli had been sent to Blackburn were visited, and the cows examined.

No. 1. No cows showing signs of Tuberculosis of the udder were found, and a subsequent control sample of milk was negative.

There was a history of cows having been sold between the taking of the sample and the visit of examination. It is, therefore, probable that one of these cows had originally caused the tubercular infection of the milk.

No. 2. One cow showed abnormality of the udder and a special sample of milk was taken, which proved negative, as did also the control sample of the remainder of the herd. A second special sample of milk was taken from the same cow, and this also proved negative, but a later mixed sample from the same herd (No. 4) proved again to contain tubercle bacilli.

No. 3. In this case no cow affected with Tuberculosis of the udder was found, and subsequent examination of the milk was negative. Cows had been sold between the taking of the sample and the visit of inspection.

No. 4. This was the second mixed milk sample taken from the same herd as No. 2—and a cow affected with Tuberculosis of the udder was found.

No. 5. No cows showing any evidence of Tubercular udder were found. Two control samples of milk from the whole of the herd were taken and were negative. One cow had been sold to a dealer who, later, told the owner that the cow had died.

All these five farms were situated outside the Borough of Blackburn, and with routine veterinary inspection of the herds, all the cows causing the tubercular infection of the milk would probably have been discovered.

The taking of samples of milk is the only way which we in Blackburn have of ascertaining the quality of the milk, but it is very unsatisfactory, as milk supplies are often infected with tubercle bacilli at least weeks before the infection is discovered. There should be regular clinical examination of all cows producing milk.

All the special samples which were found to contain tubercle bacilli were taken from cows on farms in the Borough.

No. 1 was reported by the owner.

No. 2 was found during routine examination of the herd.

No. 3 was found during routine examination of the herd.

No. 4 was reported by the owner.

No. 5 was found during routine examination of the herd where No. 4 had been reported from.

No. 6 was found during routine examination of the herd.

Of the four special samples of milk taken from individual cows, and which were found to be negative on examination :—

No. 1 was from a cow which was taken under the Tuberculosis Order, 1925, and which on post mortem examination was found to be affected with Tuberculosis in an advanced degree.

Nos. 2 and 3 were from one cow which was sold and lost sight of. No. 4 was taken from a cow showing abnormality of the udder during a routine examination of the herd.

Seven cows affected with Tuberculosis of the udder were sent to the Public Abattoir by the County Authority for slaughter.

Mixed samples of milk supplied to the Royal Infirmary and the Corporation Hospital were taken monthly and examined for the presence of tubercle bacilli, and on each occasion were found to be free.

EXAMINATION OF MILK FOR DIRT.

During the year 224 samples of milk were taken and submitted to me for the presence of visible dirt.

Fifty-seven of these samples were taken from producer-retailers whose premises are within the Borough and were classified as follows :—

Clean	11 or 19·3%
Fairly Clean	24 or 42·1%
Contaminated	16 or 28·1%
Grossly Contaminated	4 or 7·0%
Very grossly contaminated	2 or 3·5%

Sixty-four samples were taken from retailers who reside in the Borough, but who procure their supplies from producers whose premises are for the most part outside the Borough :—

Clean	3 or 4·7%
Fairly Clean	27 or 42·2%
Contaminated	20 or 31·2%
Grossly Contaminated	12 or 18·8%
Very Grossly Contaminated	2 or 3·1%

Six samples taken in connection with the Clean Milk Competition were all clean.

Seventy-eight samples were taken from producer retailers whose premises are situated outside the Borough :—

Clean	10 or 12·8%
Fairly Clean	38 or 48·7%
Contaminated	18 or 23·1%
Grossly Contaminated	11 or 14·1%
Very Grossly Contaminated	1 or 1·3%

Eight samples were taken from retailers who reside outside the Borough and also obtain their supplies from farms outside the Borough :—

Fairly Clean	4 or 50·0%
Contaminated	3 or 37·5%
Grossly Contaminated	1 or 12·5%

Six samples were taken from wholesale producers whose premises are outside the Borough :—

Fairly Clean	2 or 33·3%
Contaminated	4 or 66·6%

Five samples were taken from wholesale producers whose premises are in the Borough .—

Fairly Clean	1 or 20·0%
Contaminated	4 or 80·0%

REPORT OF THE VETERINARY INSPECTOR ON WORK DONE UNDER THE DISEASES OF ANIMALS ACTS AND ORDERS.

Foot and Mouth Disease. There were 208 outbreaks in Great Britain, necessitating the slaughter of 20,170 animals which were diseased, or had been exposed to infection.

No cases occurred in Blackburn, but the district was under restrictions in the early part of the year, following the outbreak in 1925.

It is of interest to note that the multiple invasions occurring in Great Britain during the last few years have been co-existent with an exceptionally severe epidemic on the Continent ; France, Belgium, Holland and Denmark in particular, being heavily infected.

The actual transmitting agent has long been in doubt ; the migration of birds has been blamed ; vegetables, wrapping of rose trees and other plants also, but in May, 1926, following an outbreak at Carluke, Lanarkshire, it was found that Foot and Mouth Disease was present in pig carcases which had been sent from Belgium for curing to a bacon factory in the district.

A thorough investigation followed, and pig carcases affected with Foot and Mouth Disease were later discovered at Kilmarnock, Carlisle, Dumfries and Leith. These were consigned from Rotterdam. It has, therefore, now been definitely established that one of the most dangerous sources of infection in this country were carcases arriving from the Continent.

As a result, the importation of carcases from the Continent has been prohibited under the Importation of Carcases (Prohibition) Order of 1926.

Anthrax. There were 706 outbreaks in Great Britain affecting 848 animals. No cases occurred in animals housed in Blackburn, but a knackerman in the Borough reported suspicious signs in the carcase of a cow which had been brought to the knacker yard from a farm outside the Borough.

A microscopical examination of blood from the carcase was made, and Anthrax bacilli were found. The carcase was removed to the Audley Destructor and cremated.

The premises and vehicle were disinfected and the Local Authority of the District in which the farm was situated was notified.

The knackerman who had handled the carcase was kept under observation until all danger of infection passed.

Routine microscopical examination of blood smears from carcases of animals arriving at the Abattoir in a dead or dying condition by rail was carried out throughout the year, but no cases were found.

Parasitic Mange. There were 433 outbreaks reported in Great Britain, involving 656 animals.

Two cases were reported in Blackburn ; one by the owner, and the other by the Veterinary Surgeon in attendance.

Both animals were kept under observation until cured.

Glanders. Only one case in a horse occurred in Great Britain during 1926.

Sheep Scab. There were 717 outbreaks in Great Britain none of which occurred in Blackburn.

Swine Fever. One thousand two hundred and seven outbreaks of this disease were reported in Great Britain. No cases occurred in Blackburn.

Tuberculosis. Nineteen hundred and twenty-six was the first full year of working the Tuberculosis Order 1925.

The number of animals which were found to be affected in Blackburn was 26.

Of these 26 : 10, or 38·46% were classed as Tuberculous emaciation.

Ten, or 38·46% were classed as having a chronic cough, and showing definite clinical signs of Tuberculosis ; 6, or 23% were affected with Tuberculosis of the udder. On post mortem examination, 24 were found to be advanced cases and two local cases.

TUBERCULOSIS ORDER OF 1925.

	TUBERCULAR UDDER	T.B. WITH CHRONIC COUGH	TUBERCULOUS EMACIATION
January	1	—	—
February.. ..	2	3	1
March	—	—	—
April	2	4	—
May	—	—	2
June	—	—	2
July	—	—	—
August	1	—	—
September	—	1	2
October	—	1	1
November	—	1	—
December	—	—	2
	6	10	10

1 T.B. udder at Cattle Market : Slaughtered at Abattoir not under the Order.

Cattle Market. Following the closure of the market, owing to the outbreak of Foot and Mouth disease at the latter part of 1925, it was re-opened on January 25th, 1926.

The market was again closed on February 1st, and re-opened on February 15th, and remained free during the rest of the year.

I discovered one cow affected with Tuberculosis of the udder amongst animals exposed for sale by a dealer, who elected to have the animal slaughtered at the Public Abattoir.

On post mortem examination the disease was found to be advanced, and the carcase was totally condemned.

The approximate number of animals exposed for sale was :—

Year.	*Cattle.*	*Sheep.*	*Calves.*	*Pigs.*	*Horses.*
1926	8092	7410	2285	930	20

The figures for the preceding ten years are :—

Year.	*Cattle.*	*Sheep.*	*Calves.*	*Pigs.*	*Horses.*
1925	7171	6962	2346	486	23
1924	5609	5608	3493	620	24
1923	7716	10026	3040	721	35
1922	4650	11289	2681	362	554
1921	4681	1913	2812	835	416
1920	9341	942	2258	530	365
1919	8345	17223	2188	163	269
1918	6424	23043	1832	111	126
1917	5599	503	2530	284	40
1916	4045	126	—	98	2

E. J. BURNDRED,

Veterinary and Chief Meat Inspector.

POINTS IN THE VETERINARY SURGEON'S REPORT.

The number of certified milk dealers retailing milk in the Borough has increased from one at the beginning of the year to three at the end. In the same way, Grade " A " producers have increased from six to nine. Blackburn stands in a very favourable position in this respect in comparison with most industrial areas.

I would particularly emphasise Mr. Burndred's remarks on the bottling of milk. The success of the designated milks has led to widespread and promiscuous bottling. Many of the premises I have visited, in company with Mr. Burndred, were totally unfitted for carrying out bottling in a cleanly manner, neither had some of the farmers who were bottling any clear conception of what was meant by cleanliness. If the public like milk in bottles there is nothing to prevent it, but they should clearly understand that bottled milk is not necessarily Grade " A " or Certified Milk. It is ordinary milk, clean or dirty, Tubercle free or Tubercle infected, as the case may be, which has been poured into bottles. Designated milks have their designation clearly indicated on the cap of the bottle. Instances come to my notice, not seldom, of persons who are buying bottled milk under the impression that they are getting a designated milk. A bottled milk " may be as good as " Grade " A "—though in the cold test of bacteriological results it very rarely is—but unless it is stamped Grade " A " and is produced on a licensed Grade " A " farm, from inspected cattle, it is not Grade " A ".

TUBERCULOSIS IN CATTLE.

Tuberculosis Order, 1925. In the above report it will be noted that seven cows on six farms were found, on veterinary inspection, to be suffering from Udder Tuberculosis, and in addition 20 cows, giving clinical evidences of Tuberculosis—other than udder infection—were slaughtered and found post mortem to have the disease in an advanced form.

Section 2 of the Order states : " Every person having in his possession, or under his charge (i) any cow which is, or appears to be, suffering from Tuberculosis of the udder, indurated udder, or chronic disease of the udder, or (ii) any bovine animal which is, or appears to be, suffering from Tuberculous emaciation, or (iii) any bovine animal which is suffering from a chronic cough, and showing definite clinical signs of tuberculosis ; shall, without avoidable delay, give information of the fact to a constable of the police force or to an Inspector of the Local Authority.

Later on in the Order (Article 10) (1) it is laid down that milk produced by any cow which is, or appears to be suffering, from chronic disease of the udder or tuberculous emaciation, or is suffering from a chronic cough, shall not be mixed with other milk until proved by various means to be harmless. All such milk has to be sterilized and the utensils in which it may be placed cleansed with boiling water.

The bacteriological examination of 130 samples of milk showed the presence of Tubercle Bacilli in 11 cases, a percentage of 8·4. Excluding special samples the percentage of positive cases was 4·2. In face of the known and proved relationship between glandular and abdominal Tuberculosis in man, and tubercular milk, the above facts are disquieting. Things are, however, better than in past years. It is a routine practice in Blackburn to ascertain the milk supply in all cases of notified Tuberculosis in human beings, and the investigations have proved valuable. Owing to the fact that considerable time elapses between the time of infection and the manifestations of symptoms in humans, it is rarely possible actually to find a tubercular cow on a suspected farm. On questioning, however, the farmer often vouches that he had a beast that was ailing and got rid of her. Again, it is surprising that so many persons purchase milk from vendors, and are quite unable to give the vendor's name. The public have put astonishing faith in the innocuousness of milk, but indications are not wanting that propaganda has somewhat shaken this faith, and the purchasing public are requiring to know more about the milk they buy.

The Cleanliness of Milk. During the year repeated examinations of milk samples were made for the presence of visible dirt. The percentages clean showed an improvement over the 1925 figures. For example, in 1925, Group I—Producer-retailers within the Borough, the percentage clean and fairly clean was 50%, as compared with 61·4% in 1926. For retailers within the Borough obtaining supplies from producers outside the Borough, the corresponding figures were: 1925, 48·56%, and 1926, 46·9%. For producer-retailers without the Borough: 1925, 35·53%; 1926, 61·5%.

The test used by the Veterinary Inspector is a filtration one, and shows only visible dirt, such as, particles of manure, hairs, grit, etc. Particulars of Bacteriological tests for cleanliness are given on page 180.

SECTION 80, BLACKBURN CORPORATION ACT, 1922.

FOOD PREPARING PREMISES.

This Section reads as follows:—"Any premises ordinarily used or proposed to be ordinarily used for the preparation or manufacture of sausages, pressed, potted, or preserved meat, fish, or other food intended for the purposes of sale, shall be registered by the owner or occupier thereof with the Corporation from time to time in such manner as they may direct, and no premises shall be used for the purposes aforesaid unless the same are so registered, and the Corporation shall have power to refuse registration of any premises where the conditions are unsuitable."

There are 46 premises registered under the above Section, but, in addition, there are a large number of food preparing premises which are exempt from registration.

Three hundred visits were made, and, with few exceptions, the premises were found to be clean, and conformed generally with the requirements.

In several cases suggestions were made to improve ventilation, storage of food, and removal of trade refuse.

Where it was considered necessary to issue instructions for improvements, either of method or structure, to be carried out, the requirements were met.

In a number of cases premises have ceased to be used.

BAKEHOUSES.

There are approximately 317 premises in the Borough where bread, biscuits, or confectionery are made for sale. Included in this number there are 52 factories where power is employed for mixing purposes. In most of the factories electrical power is provided in self-contained mixing machines, which take up little space, and this has proved of such assistance that gradually the preference for hand-mixed confectionery is being broken down.

On many of the premises baking is done in the rooms used as sculleries by the family, and although these bakehouses are clean and well-kept, it would be preferable if the baking was carried out in an apartment specially prepared for it.

FARM PREMISES.

There are 73 dairy farms in Blackburn, from 69 of which milk is retailed in the town. The other farmers sell their milk wholesale. One hundred and thirteen farmers from outside the Borough are licensed to retail milk within it.

During 1926 many of the outstanding alterations have been carried out. There are still five farms at which the necessary alterations have not been completed, but will be done as soon as the cattle are turned out to grass. Sixty-eight farms are now in a satisfactory sanitary condition.

DAIRIES.

There are now 95 registered dairies and milk-shops ; they have all been regularly inspected. Covered retainers or other suitable vessels for storing milk are insisted upon where there is any danger of contamination.

SALE OF FOOD AND DRUGS ACTS.

The Public Analyst is W. H. Roberts, Esq., M.Sc., F.I.C. The number of samples examined was 490, of which 31, or 6·3% were reported to be adulterated, or not up to the standard. This compares with 9·2% in 1925, and 10·3% in 1924. Three hundred and fifty-three samples of milk, 98 of which were informal, that is. taken without the vendors knowing that they were to be examined. Thirty-one milk samples, or 8·7%, were not up to the standard prescribed by the Ministry of Agriculture ; the corresponding figure in 1925 was 9·2%. The 1926 samples included 22, or 6·2% of the total, in which the deficiency was considerable. The number of vendors concerned in these samples was 11. A formal sample is purchased immediately after the analysis of an informal one has shown that it is not up to standard. In nine formal samples the deficiencies were marked, and the seven vendors concerned were prosecuted. The total amount of the fines was £27 16s. 0d. The average composition of all the samples analysed during the year was : fat, 3·70% ; non fatty solids, 9·02%.

On four occasions margarine was found exposed for sale not properly labelled ; 14 milk cans and 7 milk floats were also insufficiently labelled. In each of these cases the vendors were warned.

SAMPLES OF MILK FOUND ON ANALYSIS TO CONTAIN COW DUNG BY VOLUME PER 100,000 PARTS OF THE SAMPLE.

*34 samples, less than 1.
*10 samples contained 1.
*9 samples, less than 2.
*1 sample contained 3 parts.
1 sample contained 6 parts ; Vendor fined £2, and eight shillings analyst fee.

* *Warning letter.*

PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912 & 1917.

1. Milk and Cream not sold as preserved cream.

No. of Samples examined for the presence of a preservative—

Milk	355
Cream	2

No. in which preservative was reported to be present and percentage of preservative found in each sample—

Milk	*Nil.*
Cream	*Nil.*

2. Cream sold as Preserved Cream.

(*a*) Instances in which samples have been submitted for analysis to ascertain if the statements on the label as to preservative were correct .. .. —

(i) Correct statements	8
(ii) Incorrect statements	*Nil.*

(iii) The label in each case stated the cream contained boracic acid in amount not exceeding 0·4%. The actual amounts found were :—

0·26%	0·23%
0·32%	0·23%
0·36%	0·22%
0·36%	0·15%

(*b*) Determination made of milk fat in cream sold as preserved cream—

(i) Above 35%	8
(ii) Below 35%	*Nil.*

(*c*) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V (I) and the proviso in Article V (II) of the Regulations have not been observed .. .. *Nil.*

(*d*) Particulars of each case in which the Regulations have not been complied with and action taken .. .. *Nil.*

3. Thickening substances.

Any evidence of their addition to cream or preserved cream ..	*Nil.*
Action taken where found	*Nil.*

TABLE 90.

SALE OF FOOD AND DRUGS ACTS.

	Samples Taken.		Samples Genuine.		Samples Adulterated.	
	Formal.	Inform'l	Formal.	Inform'l	Formal.	Inform'l
Milk	255	98	235	87	20	11
Margarine...	—	15	—	15	—	—
Cheese	—	6	—	6	—	—
Lard	—	9	—	9	—	—
Jam	—	13	—	13	—	—
Butter	1	21	1	21	—	—
Baking Powder	—	10	—	10	—	—
Condensed Full Cream Milk (Sweetened)...	—	2	—	2	—	—
Coffee	—	13	—	13	—	—
Egg Powder	—	1	—	1	—	—
Cocoa	—	4	—	4	—	—
Preserved Cream...	—	8	—	8	—	—
Custard Powder	—	7	—	7	—	—
Ice Cream...	—	3	—	3	—	—
Cream	—	2	—	2	—	—
Tea	—	10	—	10	—	—
Skimmed Milk	—	2	—	2	—	—
Rice	—	7	—	7	—	—
Shredded Suet	—	1	—	1	—	—
Sugar	—	2	—	2	—	—
TOTAL	256	234	236	223	20	11

TABLE 91.

SALE OF FOOD AND DRUGS ACTS.—ACTION TAKEN IN REGARD TO ADULTERATED SAMPLES.

Articles. Purchased.	Number Analysed	Number Genuine	Number Adul'rated	Number of Sample	Formal	Informal	Amount of Adulteration.	Action Taken.
Milk	353	322	31	28	1	–	6 parts of cow dung by volume per 100,000 parts of the sample	Vendor fined £2/0/0 and 8/0 for the cost of the analysis.
				29	1	–	2 parts Do. do. do.	Warning letter ; other samples taken and found genuine.
				31	1	–	2 parts Do. do. do.	Do. do. do. do.
				34	–	1	16% deficient in fat	Formal samples taken and found genuine.
				70	1	–	6% deficient in fat	Warning letter ; other samples taken and found genuine.
				84	–	1	5% deficient in fat	Formal sample taken and found genuine.
				92	–	1	15% of added water	See formal sample 100.
				100	1	–	10% of added water	Fined £1 and 8/0 for the cost of analysis.
				105	–	1	8% deficient in fat	See samples No. 114, 133, 134, 135 and 136.
				111	1	–	7% deficient in fat	Warning letter ; other samples taken and found genuine.
				114	1	–	21% deficient in fat	Interview with Producer and with Ministry of Health.
				133	–	1	5% deficient in fat	
				134	–	1	Slightly deficient in fat	
				135	–	1	13% deficient in fat	
				136	–	1	7% deficient in fat	
				173	1	–	2·5 parts of cow dung by volume per 100,000 parts of the sample	Warning letter ; other samples taken and found genuine.
				174	1	–	2·7 Do. do. do.	Do. do. do. do.

TABLE 91—(*Continued*).

SALE OF FOOD AND DRUGS ACTS.—ACTION TAKEN IN REGARD TO ADULTERATED SAMPLES.

Articles Purchased.	Number Analysed	Number Genuine	Number Adul'rated	Number of Sample	Formal	Informal	Amount of Adulteration.	Action Taken.
Milk	—	—	—	202	1	–	Slightly deficient in fat.	Other samples taken and found genuine.
				207	1	–	4% deficient in fat	Other samples taken and found genuine.
				208	1	–	6% deficient in fat	Fined £2/0/0 and 8/0 cost of analysis.
				261	1	–	7% deficient in fat	Fined £10/0/0 and 8/0 cost of analysis.
				274	1	–	16% deficient in fat	Fined £2/4/0 and 8/0 cost of analysis.
				301	–	1	21% deficient in fat	See Samples Nos. 312, 313, 314, and 318.
				305	–	1	10% of added water	See Sample No. 322.
				313	1	–	13% of added water	Fined £2/0/0 and 8/0 cost of analysis.
				314	1	–	5% of added water	Fined £1/0/0 and 8/0 cost of analysis.
				318	1	–	10% of added water	Fined £1/0/0 and 8/0 cost of analysis.
				322	1	–	18% of added water	Fined £3/0/0 and 8/0 cost of analysis.
				397	–	1	2 parts of dirt per 100,000 parts of the sample	Formal sample taken and found genuine.
				447	1	–	4% of added water	Rich milk in fats. Case too weak; other samples taken and found genuine.

ATMOSPHERIC POLLUTION.

Table 92 gives a summary of the amounts of soluble and insoluble matter which fell, firstly in the neighbourhood of the Technical College, and, secondly, at the Corporation Hospital. The classification is made in four degrees, A being slight deposit, D great deposit. The results, when analysed, are interesting, and show no great difference from readings in previous years.

Owen's Automatic Air Filter is used at the Technical College, and an average of the hourly readings throughout the year yields interesting results.

1. The amount of suspended matter in the air was invariably least between 3 and 4 a.m.
2. The amount rose slightly between 4 and 5 a.m., more rapidly between 5 and 6 a.m., and very rapidly from 6 to 9 a.m.
3. From 9 a.m. to noon the amount of impurity was consistently high. The average maximum impurity for the winter months occurred between 7 and 9 a.m. For the summer months between 9 and 11 a.m.
4. From 12 noon to 1 p.m. there was for all months a decided drop in the atmospheric impurity, which reached its minimum between 1 and 2 p.m. From this time there is a secondary rise in the amount of impurity to a maximum between 5 and 9 p.m.
5. There is a distinct difference in the time of this secondary rise between the winter and summer months. In the summer months the maximum is reached between 8 and 10 p.m. In the winter months it is earlier, viz., between 3 and 5 p.m.
6. From the above times there is a rapid drop in the impurity up to midnight.

The following are the monthly results obtained at the Technical College (1) and at the Corporation Hospital (2) by the analysis of water collected in the rain gauges. This water contains much of the soluble and insoluble atmospheric impurities.

The Table shows that the atmosphere of Blackburn in 1926 was most impure in January and November. During the months of April, May, June, July, August and September the atmospheric conditions reached a higher standard of cleanliness than for many years past. Grade B prevailed in the centre of the town, but at the Corporation Hospital Grade A was recorded in seven months out of the 12. A peculiar feature was the clearness of the atmosphere on the top of the hill, compared with the murkiness in the centre of the town during November. This was a month of little wind, with rain and mist.

TABLE 92.

ATMOSPHERIC POLLUTION IN BLACKBURN, 1926.

Gauge 1. Balcony of Technical College. 400 feet above sea level.
,, 2. Corporation Hospital. 600 ,, ,,

1926 Month.	No. of Gauge.	Rainfall in m.m.	Metric Tons per Square Kilometre.								Classification.	Included in Soluble Matter.		
			Insoluble Matter.					Soluble Matter		Total Solids.		Sulphate.	Chloride.	Ammonia.
			Tar.	Classification.	Carbonaceous other than Tar	Ash.	Total Insoluble matter	Loss on ignition	Ash.					
Jan.	1	107·7	0·308	D.	2·633	4·745	7·686	3·212	6·944	17·842	C.	3·051	1·557	0·129
	2	106·9	...	...	...	...	1·729	...	...	5·556	B.	...	...	...
Feb.	1	120·9	0·1834	C.	2·272	3·963	6·418	1·983	5·367	13·768	B.	3·038	1·098	0·906
	2	112·6	...	...	...	...	2·260	...	...	7·324	B.	...	...	...
March	1	34·94	0·215	C.	2·345	7·652	10·212	0·754	2·593	13·559	B.	1·031	0·819	0·0582
	2	29·74	...	...	...	...	2·394	...	...	6·714	B.	...	...	...
April	1	40·45	0·2052	C.	2·043	5·053	7·301	0·655	1·787	9·743	B.	1·394	0·490	0·1011
	2	47·68	...	...	...	...	0·852	...	...	3·607	A.	...	...	...
May	1	82·1	0·234	C.	2·531	6·077	8·842	0·919	2·775	12·536	B.	1·624	0·622	0·0923
	2	88·20	...	...	...	...	0·840	...	...	3·680	A.	...	...	...
June	1	62·40	0·274	D.	2·210	8·069	10·553	0·761	1·447	12·76	B.	1·045	0·331	0·0624
	2	76·4	...	...	...	...	1·541	...	...	3·772	A.	...	...	...
July	1	67·98	0·168	C.	2·199	6·698	9·065	0·353	1·440	10·858	B.	0·996	0·463	0·0227
	2	67·87	...	...	...	...	0·607	...	...	3·811	A.	...	...	...
Aug.	1	95·72	0·189	C.	2·508	6·409	9·106	0·575	2·393	12·074	B.	1·006	0·425	0·0798
	2	109·5	...	...	...	...	0·811	...	...	3·459	A.	...	...	...
Sept.	1	125·7	0·24	C.	1·7	4·3	6·24	0·68	2·7	9·679	B.	1·2	0·72	0·082
	2	107·6	...	...	...	...	0·70	...	...	3·69	A.	...	...	...
Oct.	1	93·24	0·18	C.	1·86	4·65	8·69	1·70	4·25	12·64	B.	1·84	1·20	0·14
	2	97·89	...	...	...	...	2·71	...	...	6·41	B.	...	...	...
Nov.	1	193·4	0·21	C.	2·46	6·56	9·23	3·19	4·93	17·35	C.	2·26	1·35	0·093
	2	124·4	...	...	...	...	1·02	...	...	3·24	A.	...	...	...
Dec.	1	50·98	0·29	D.	1·72	3·14	5·15	1·66	4·31	11·12	B.	2·48	0·89	0·115
	2	43·19	...	...	...	...	3·32	...	...	5·94	B.	...	...	...

That the burning of raw coal, with the production of black smoke, is both wasteful of money and, not less, of health, has been so repeatedly proved that further comments are unnecessary.

The Report of the Coal Commission remarks that the amount of soot discharged into the air annually is estimated to be equal in weight to nearly three days' output of all the collieries of Great Britain. The work of over a million men for three days each year is devoted to providing the soot which pollutes the atmosphere. The Coal Dispute, with the consequent remarkable clarity of the atmosphere, gave force to this, if any force were needed to emphasise a phenomenon of every day observation.

By the distillation of coal, gas is obtained for lighting. heating, cooking, and power, coke for heating and power. petroleum and other oils, explosives, fertilisers, dyes and numerous valuable chemical products. The utilization of some 10% of the energy value of raw coal in raising steam power and producing electricity, compares unfavourably with the 25% that can be obtained through the methods of the gas industry. The present method of utilizing the energy stored up in coal is an uneconomical one in two ways Firstly, as briefly explained above ; and secondly, by the loss due to smoke pollution of the atmosphere, the corrosion of buildings, the soiling of clothes and decorations, the loss of time entailed by fogs, and the loss of health through the deprivation of sunlight. This loss has been put at £100,000,000. To balance the loss of sunlight due to improper use of ' The stored sunlight of past ages," it has been found necessary to recommend the widespread establishment of Ultra Violet Light Clinics. The excellent effects of visible sources of radiant energy, as well as the invisible Ultra Violet rays, have been demonstrated during the winter in the Zoological Gardens. Animals which it was impossible to maintain in health previously have thrived under the use of arc lamps.

The Fuel Research Board in their investigations estimated the cost of gas for air heating as about 2½ times, and the cost of electricity about 7½ times, that of coke for continuous heating. But owing to the greater ease of control of gas or electric appliances, they need not generally be left on for a 24-hour day. For a 16-hour day their costs would be reduced to 1·7 and 5 times that of coke, if no allowance was made for the fact that a small additional amount of heat would then be required to make good the heat losses from the structure of the room which continue during the non-heating periods.

For continuous heating by far the cheapest means of providing radiant heat is an open fire of low temperature coke : open coal fires are slightly more expensive : gas fires are about 2½ times as dear as coal, and electric heaters are about 5½ times as dear as coal. For intermittent heating, however, assuming that the gas fires or electric heaters are turned off immediately they are finished with, and neglecting the fact that for intermittent heating the room temperatures will be lower than for continuous heating, the cost of gas or electric heating will be in proportion to the time of operation.

I am indebted to the Electrical Engineer and the Gas Enigneer respectively for the information given below.

Electrical Apparatus. The number of electrical apparatus, etc., supplied during 1926 was: Cookers, 524; kettles, 510; radiators, 868; irons, 714; wash-boilers, 61; vacuum cleaners, 258; sundry, 114.

The total number of mills electrified up to December 31st, 1926, was sixty-eight; the number of mills taking the whole of their power requirements from the Corporation mains was fifteen; the number of mills taking a portion of their power requirements from the Corporation was fifty-three.

Gas Apparatus, etc. The approximate number of gas appliances in use at the end of 1926 was: Gas cookers, 21,033; gas boilers, 9,641; gas fires and radiators, 3,731; and gas grillers, etc., 18,914.

The Coal dispute gave a considerable impetus to the sale or loan of gas and electrical heating and power appliances, as may be seen by comparing this year's figures with those for 1925 (page 177, Annual Report, 1925).

SMOKE OBSERVATIONS.

There are 183 factory chimneys in the town, 99 of which are provided with smoke consuming appliances. Twenty-five smoke observations, each of half an hour's duration, and 18 each of an hour's duration, have been taken, and in nine black smoke was emitted in excessive quantities.

One informal notice and one letter were issued during the year, and resulted in an improvement in the chimneys concerned.

The standard of amounts of Black Smoke allowed to be emitted from a factory chimney in Blackburn are as follows:—

One boiler	4 minutes black smoke in the hour
Two boilers	5 ,, ,, ,,
Three boilers	6 ,, ,, ,,
Four boilers or more	7 ,, ,, ,,

From the above observations it will be gathered that atmospheric pollution is by no means entirely caused by industrial processes. The records furnished by Owen's Automatic Air Filter show that the period of greatest pollution is during the time when household fires are being made up to cook the mid-day meals. The secondary rise occurs at a time coincident with similar preparations for the evening meal.

Out of the nine occasions on which black smoke was emitted in excessive quantities, three were in connection with one chimney while experiments were going on with smoke preventing appliances. One was in connection with a chimney outside the Borough ; in the other occasions the excess was so slight that other observations were taken, with good results.

Night air is considerably cleaner than day air, and thereby the popular fallacy of the harmful effects of night air is exploded.

TYPE OF SMOKE PREVENTING APPLIANCES.

Proctor's Mechanical Stokers	74
Leach Mechanical Stokers	7
Bennis' Mechanical Stokers	3
Hodgkinson Mechanical Stokers	3
Whittaker Mechanical Stoker	1
G.S.E. Mechanical Stoker	1
Sirroco Fans	3
Super Heaters	3
Edgar Allen Green	4

THE WORK OF THE SANITARY INSPECTORIAL STAFF.

I am indebted to the Borough Engineer, Mr. A. T. Gooseman, for the following particulars in relation to Sanitary Accommodation, Scavenging, Water Supply, and Housing.

1. SANITARY ACCOMMODATION :—

Privies	18
Pail Closets	133
Slop Water Closets	2351
Fresh Water Closets	36924
	39426

Conversions—

Pail Closets by Owners	13	
Pail Closets by Corporation	45	— 58
Wet Pits by Owners	1	
Wet Pits by Corporation	3	— 4
Tipplers by Owners	36	
Tipplers by Corporation	4	— 40

2. NEW SEWERS :—

Cornelian Street	170 yds.	9 ins.
Green Lane	175 yds.	9 ins.
Hamilton Street	100 yds.	9 ins.
Hare and Hounds to Pleckgate Road	830 yds.	15 ins.
Lammack Road	1,110 yds.	9 ins.
Livesey Branch Road	250 yds.	9 ins.
Ramsey Road (Back Road)	74 yds.	9 ins.
Revidge Road	100 yds.	6 ins.
Shorrock Lane	400 yds.	12 ins.
Shorrock Lane	110 yds.	9 ins.
Whalley Old Road (Back Road)	350 yds.	9 ins.
Arterial Road	896 yds.	15 ins.
Arterial Road	1,134 yds.	12 ins.

3. LAVATORY AND URINAL ACCOMMODATION :—

W.C.'s and Lavatories are provided for females at Salford and the Market House.

W.C.'s for same at Corporation and Queen's Parks and Cemetery.

W.C.'s, Lavatory and Urinals are provided for males at Salford Bridge and the Market House.

W.C.'s and Urinals for same at Corporation and Queen's Parks and Cemetery.

W.C.'s and Lavatories for females are provided at Roe Lee Park and Rockcliffe Street Recreation Ground ; also w.c.'s, Lavatories and Urinals are provided for males.

At Green Park, w.c., Lavatory and Urinal accommodation is provided for males only.

W.C.'s and Lavatories for females are provided at the Tram Terminus, Wilpshire ; also w.c.'s and Urinals for males.

Urinals at Dandy Walk, Darwen Street Bridge, Infirmary Bridge, Bolton Road, Branch Road (Lower Darwen), Grimshaw Park Bridge, Audley Bridge, Cicely Bridge, Eanam Bridge, Accrington Road, Larkhill, Skew Bridge, Victoria Street (late Follywell Street), King Street Bridge, Harrison Street, Mill Hill Bridge, Mill Hill Station Bridge, Havelock Street, Cherry Tree and East Park Road.

4. COLLECTION OF REFUSE :—

	House Refuse.				Fish Refuse.				Market Refuse.				Midden Refuse.			
Year.	*Lds.*	*T.*	*C.*	*Q.*	*Lds.*	*T.*	*C.*	*Q.*	*Lds.*	*T.*	*C.*	*Q.*	*Lds.*	*T.*	*C.*	*Q.*
1920 ..	21823	37782	5	1	262	457	6	2	648	833	1	0	90	129	13	2
1921 ..	20205	36369	1	3	313	444	9	0	733	823	2	0	73	110	19	2
1922 ..	18996	33424	6	0	312	298	11	2	765	782	9	1	51	82	17	0
1923 ..	19043	33877	19	2	309	307	11	2	740	806	0	3	54	89	4	0
1924 ..	18844	33053	16	2	312	302	10	1	743	879	6	3	36	72	11	0
1925 ..	16980	28455	17	2	320	289	2	2	769	948	7	0	38	61	12	2
1926 ..	16621	27832	6	0	310	263	7	0	780	1035	8	1	38	66	19	2

No. of Receptacles in use—

No. of Ashtubs	37
No. of Ashbins	31870
No. of Ashpits (Dry)	161
No. of Ashpits (Wet)	18
No. of Excreta Tubs in use	113
No. of Tanks in use	15

No. of Ashpits or Ashtubs abolished and Bins substituted in lieu of same—

Abolished	651
Bins substituted	2106

5. WATER SUPPLY :—

The average daily consumption of water was 4,367,397 gallons, compared with 4,500,764 gallons in 1925. The estimated population supplied was 141,500. The average consumption per head per day was 30·86 gallons, compared with 31·92 gallons in 1925. Chemical and bacteriological examinations of the water were carried out every second month.

The rainfall at the Bowland Gathering Grounds was 68·78 inches, and at Blackburn and District 44·95 inches.

HOUSING.

One house has been demolished under the Towns Improvement Clauses Act, 1847.

No action has been taken in respect of temporary dwellings.

Number of New Houses completed and occupied during 1926 :—

a. Corporation houses, 170 (state aided).

b. Number built by private enterprise, 131.

c. Number built by private enterprise in respect of which a subsidy grant was made, 105.

d. Number of houses in course of erection at the end of 1926 :—
- i. By the Corporation, 170.
- ii. No. of new houses completed by the Corporation and occupied during 1926, 144.
- iii. By private enterprise, 95 (72 of these being State-aided).

e. Number of houses completed and occupied on the various Housing Estates of the Council :—

Type.		*Green Lane.*	*Intack.*	*Brownhill.*	*Hollin B'ge St.*
B3.	Parlour, 3 bedrooms	104	26	30	—
A3.	Non-parlour, 3 bedrooms	32	41	78	—
A2.	Non-parlour, 2 bedrooms	—	62	12	8
A2.	Flats	—	28	16	—
		136	157	136	8

f. The Rents of the Corporation Houses are the same as were given on page 181 of my Annual Report for 1925.

g. At the end of the year 1926 the number of applicants on the waiting lists for Corporation houses was 1,100 from residents in rooms within the Borough, and 500 from householders and residents outside the Borough.

The scheme for the replacement of ashtubs and ashpits by galvanised iron dustbins is practically completed. Theoretically this scheme should be hygienic, but in practice it is liable to break down on two points (*a*) The bins replacing the ashpits are found not infrequently to be too small to hold the amount of refuse accumulated between the periods of removal, with the result that the backyards are in a more untidy condition than formerly. If the ashbin system is to work in a thoroughly efficient manner a weekly emptying at least is necessary, and in some areas of the town it is desirable more often even than this. In the case of houses let in lodgings and apartment houses, one bin for all the occupants is not sufficient ; (*b*) Bins should be kept under cover, as lids are not seldom left off, and so the contents get wet and smelly. In some instances difficulty has arisen in emptying the bins, because there was no direct access to a back road. The bins have had to be taken through the dwelling house. This is undesirable.

General Housing Conditions in the Area. Compared with many industrial towns, Blackburn is fortunate in its housing conditions. Although there are areas which come near to the border-line between the average and the slum, it cannot be said that there is any real slum property. Certain individual streets contain poor houses in larger numbers than others. (The Census 1921 gave the number as 2,125, or 7% out of a total of 30,948). The greatest number of houses were of the four to five-roomed type (25,594, or 83%).

The Census taken in March, 1926, did not reveal any shortage of houses —a surprising result, when the length of the list of applicants for Corporation houses in borne in mind. Neither was there any universal overcrowding—the average rooms per person being 1·1. Individual cases of gross overcrowding came to the notice of the Department from time to time during the year, but investigation showed either (*a*) a bad distribution of the family in rooms, or (*b*) a deliberate sub-letting of a portion of the house to another family. This latter is the greater evil.

Group Inspection of Areas. A new system of Sanitary Survey was put in hand at the commencement of 1926. The town has been divided into four areas, and each area was sub-divided into blocks of property. All premises, etc., in the blocks is to be inspected for sanitary arrangements and general condition The primary inspection is comparatively superficial, but if unsatisfactory conditions are found a second detailed inspection is to be made and entered upon the appropriate record cards. On the completion of the inspection of each block a full summary will be made under the following headings :—I. Private Dwellings. II. Workshops. III. Mills. IV. Offensive Trade Premises. V. Dwellings and Shops. VI. Lock-up Shops. VII. Chip and Fish Shops, Milk Shops, and Food Preparing Premises. VIII. Number of Insanitary Premises. IX. Number of Unfit Premises. X. Congested Areas, Yards, etc. XI. Obstructive Buildings. XII. Summary of work carried out on request or by statutory notice.

In this manner it is hoped to make a thorough and systematic survey of the whole town, and by so doing bring to light and have remedied defects which might otherwise have escaped attention.

Fitness of Houses. The older property in the town is suffering from the effects of neglect during the war years, and, particularly when abutting important thoroughfares, from the vibration set up by fast, heavy traffic. Some houses are literally becoming slowly shaken to pieces.

The areas of the town in which the worst housing conditions exist are the following :—Brunswick Street area ; Water Street and Chapel Street ; Nab Lane ; Bradshaw Street ; Bolton's Court and Tontine Street area ; Joiner's Row and neighbourhood. In the several areas extensive repairs have been carried out. With the exception of a group of houses in Brunswick Street and a house in Thomas Street, certain houses in Bradshaw Street and Jackson Street ; a group of houses in Tontine Street, which are scheduled for closure, and houses in Crook Street and Meadow Lane, the houses in the areas referred to above have been put in a fairly reasonable state of repair.

Defects in houses are not always due to the landlord's neglect. The tenant is not seldom to blame. Some tenants do not appear to have any regard for other people's property, and this type naturally gravitate to the worst type of landlord, for the reason that the good landlord will not have them. Particularly with relation to blocked drains and deranged water closets is the tenant at fault. Such articles as clothes, empty salmon tins, brickbats have been extracted from drains as the cause of the blockage. The best laid drain imaginable cannot cope with material of this nature.

The most usual defects met with in the routine inspection of houses are: (1) Dampness due to defective roofs, eaves and pointing; (2) defective window cords and frames, cracked ceilings and defective floors; (3) defective gutters and deranged or defective water closets; (4) dangerous and defective chimney stacks; and (5) defective dishstones.

Increase of Rent and Mortgage Interest (Restriction) Acts. One application has been received for a certificate to be granted. The applicant pays a fee of one shilling, and thereupon a complete survey of the house is made. The certificate was granted in this case to the applicant; later the work required was completed and the certificate revoked.

1.—NUMBER OF NEW HOUSES ERECTED DURING THE YEAR:—

(*a*) Total	301
(*b*) With State assistance under the Housing Acts 1919 or 1923:—	
(i) By the Local Authority	170
(ii) By other Bodies or Persons..	131

Unfit Dwelling Houses:—Inspection.

(1) Total number of Dwelling Houses inspected for housing defects (under P.H.A. or Housing Acts)..	4333
(2) No. of Dwelling Houses which were inspected and recorded under the Housing (Inspection of District) Reg. 1910..	190
(3) No. of Dwelling Houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	—
(4) No. of Dwelling Houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation	2088

2.—REMEDY OF DEFECTS WITHOUT SERVICE OF FORMAL NOTICES:—

No. of Defective Dwelling Houses rendered fit in consequence of informal action by the Local Authority or their Officers..	1721

3.—ACTION UNDER STATUTORY POWERS :—

A.—Proceedings under Section 3 of the Housing Act, 1925.

(i) No. of Dwelling Houses in respect of which Notices were served requiring repairs 10

(ii) Number of Dwelling Houses which were rendered fit after service of formal notices—

- (*a*) By Owners .. .. *In Progress.*
- (*b*) By Local Authority in default of Owners .. .. .. *Nil.*

(iii) No. of Dwelling Houses in respect of which Closing Orders became operative in pursuance of declarations by Owners of Intention to close .. .. *Nil.*

B.—Proceedings under Public Health Acts.

*(i) No. of Dwelling Houses in respect of which Notices were served requiring defects to be remedied 456

*(ii) No. of Dwelling Houses in which defects were remedied after formal notices—

- (*a*) By Owners 273
- (*b*) By Local Authority in default of Owners .. .. .. *Nil.*

*The difference of 183 between I and II under B is accounted for by the circumstance that these were in process of completion at the end of 1926.

C.—Proceedings under Sect. 17 *&* 18 *of the Housing, Town-Planning, etc., Act,* 1909.

(i) No. of Representations made with a view to the making of Closing Orders .. .. *Nil.*

(ii) No. of Dwelling Houses in respect of which Closing Orders were made .. .. *Nil.*

(iii) No. of Dwelling Houses in respect of which Closing Orders were determined, the Dwelling Houses having been rendered fit.. .. *Nil.*

(iv) No. of Houses in respect of which Demolition Orders were made .. *Nil.*

(v) No. of Dwelling Houses demolished in pursuance of Demolition Orders .. .. *Nil.*

HOUSES LET IN LODGINGS.

There are 79 of these tenements on the register, and they contain 334 rooms, which provide living and sleeping accommodation for 570 adults and 217 children.

Weekly inspections have been made by Inspector Kenyon, and also frequent visits paid by the Medical Officer of Health and the Chief Sanitary Inspector, during the year.

Although the rents charged are, in most instances, exorbitant, the accommodation is unsatisfactory, the furniture provided very scanty, and there is no provision for changing the worn-out and unclean bedding.

Two thousand one hundred and seventy-seven visits have been paid during the year, and notices have been issued, both verbal and preliminary, for defects which have occurred, but there has been no occasion to take legal proceedings.

The distinction between Common Lodging Houses and Houses Let in Lodgings is that in the former inmates pay nightly for lodging ; in the latter payment is weekly or at longer intervals. This distinction causes difficulties in Health Administration. The lower type of House Let in Lodgings is inferior to the Common Lodging House inasmuch as supervision cannot be so strict.

COMMON LODGING HOUSES.

There are 17 registered Common Lodging Houses, which provide accommodation for 672 persons. These have been regularly visited, and no case of overcrowding has been found. The Bye-Laws have been fairly well observed, and there has been no occasion to take legal proceedings against any of the keepers.

Situation of Premises.	*No. of Rooms.*	*Accommodation.*	
33, Larkhill Street	7	27 adults.	
66, Moor Street	19	92 ,,	
83, Moor Street	4	14 ,,	
3, Syke Street	8	66 ,,	
59, Water Street	5	26 ,,	2 children.
13, Birley Street	5	25 ,,	
7 & 9, Daisy Street	2	37 ,,	
26, Bradshaw Street	3	18 ,,	
8, Cowell Street	2	16 ,,	
15, Bent Street	3	25 ,,	
56, Chapel Street	6	36 ,,	
11, Grimshaw Park	5	21 ,,	
13, Grimshaw Park	3	18 ,,	2 children.
33, Joiner's Row	6	33 ,,	
8, Mount Pleasant	8	65 ,,	
31, King Street	10	65 ,,	
1, Jackson Street	5	88 ,,	
	101	672	4

TENTS, SHEDS, CARAVANS, ETC.

Within comparatively recent years there has been a steadily growing tendency for these substitutes for houses to multiply. There are, apparently, persons who make a business of buying Caravans, etc., placing them on vacant ground which they rent, and then letting them out to tenants at from 5/0 to 10/0 per week.

The danger from the point of view of the Public Health is that the owners of the vans frequently omit any provision for an accessible and satisfactory water supply, closet accommodation, and refuse disposal. In one case the tenant had to walk nearly half-a-mile for water. Cleanliness under these conditions becomes one of the very rare virtues. The usual arrangement is for the caravan tenants to obtain their water from the nearest house and to utilise the sanitary convenience attached thereto. This is undesirable.

It is on the grounds of the causation of avoidable nuisances, and the tendency to a disorderly and restless social life that this type of dwelling is to be condemned. If caravans were set apart on land suitably drained and prepared, with proper water and closet facilities, and a constant sanitary surveillance was exerted, then, from the Health aspect, causation for complaints would be proportionally diminished.

The Sanitary Inspectors have paid 282 visits to this class of dwelling during the year.

The principal situations of these caravan colonies are Audley, Cherry Tree, Lamack, Whalley New Road, and Mill Hill.

During Easter Holiday Week, 32 travelling vans were inspected, whilst situated in the Market Place and neighbouring yards. The general cleanliness was well maintained, whilst temporary provision was made for refuse, closet accommodation, water supply, etc.

There were no cases of infectious disease, but each van occupier was instructed to report immediately to the Medical Officer of Health if any sickness occurred.

CANAL BOATS ACTS, 1877 & 1884.

One hundred canal boats have been inspected. Three infringements of the Acts have been detected, namely (*a*) Two masters without certificates, and (*b*) one boat without water casks. Three statutory notices have been served notifying the owners of the infringements, and the necessary corrections have been made. One master was cautioned for overcrowding. No case of infectious disease occurred, and there has been no detention of boats for cleansing or disinfection.

There are 86 boats on the register, which are in use or available. All of these are horse drawn. Four boats whose names are on the register have not been seen and cannot be traced. One boat has been re-registered through a change of owners and transferred to Liverpool. Two new boats have been registered.

In the 100 boats there were met with, 188 males, 22 females, and 8 children. The children were all on holiday when seen.

OFFENSIVE TRADES.

The number of premises on the Register at the end of 1926 was 32. The Trades carried on were :—

Bone, and Rag and Bone Dealing	19
Bone Boiling, Fat Rendering, etc.	4
Gut Scraping and Preparing	2
Tripe Boiling	5
Knackering	2

A bone-boiling and fat-rendering business, situated in a crowded area of the town, was the cause of numerous complaints. This business has an up-to-date Iwell plant, but little faults and omissions in working details led to the emission of offensive fumes. These premises will, I am afraid, always be liable to cause bad smells, owing to the very undesirable position in which they are placed.

Offensive Trades are best grouped together and placed away from centres of population. In Blackburn they are widely scattered and consequently make their noxious influence felt far more acutely than if they were grouped and situated on the outskirts.

The cleanliness of the premises, and the care with which the business is carried on, are important factors operating as to the production or otherwise of a nuisance.

NUISANCES.

Table 94 gives a summary of the work done by the Sanitary Inspectorial staff during the year. The number of complaints by inhabitants was 255, compared with 317 in 1925, and 268 in 1924. Five thousand six hundred and forty-two nuisances concerning 3,485 premises were abated during the year. In order to achieve these results, it was necessary to send 5,512 preliminary notices, 884 Public Health Act notices, and 209 personal letters from the Medical Officer of Health. It was not found necessary to initiate any prosecutions in this respect.

At the end of the year there were 313 notices outstanding ; 268 were in hand at the end of the year, leaving 45 still to be dealt with. Most of these notices were served towards the end of the year.

The chief nuisances dealt with may be divided into those for which the occupiers were responsible, and those for which the owners were liable. In the former group, dirty yards (116), dirty w.c. basins (100), dirty cellar areas (6), and the erection of obstructive buildings (7) were the most usual. In the latter group, defective interior fittings, etc. (1,047), defective gutters (588), damp and defective walls (685), and defective water closets (147) were the commonest.

Apparently it is becoming more common for tenants to own their own houses. This is a change which will operate for good in every way, and should be encouraged by means of making easy money available for the purpose.

The Small Dwellings Acquisition Act is for this purpose, but is not sufficiently widely known and understood.

TABLE 93.

INSPECTION WORK.

	1926	1925
No. of Complaints by Inhabitants	255	317
No. of Complaints referred from other Departments	129	116
No. of Special Inspections for suspected nuisances	213	224
No. of Nuisances Discovered as Result of :—		
Complaints by Inhabitants	647	804
Visiting Cases of Infectious Diseases	153	106
Special Inspections	356	326
Complaints from other Departments	157	142
Notifications of H.M. Inspector of Factories	11	74
Routine Inspection Visits	2427	1870
Housing and Town Planning Inspections	1215	1268
Total number of Defects found	5515	4723
Total number of Defects remedied	5642	3981
No. of Informal Notices Served	1851	4723
No. of Formal Notices Served	456	743
No. of Informal Notices complied with	1721	3238
No. of Formal Notices complied with	273	511
No. of Interviews	173	306
No. of Letters sent out	209	233

Sanitary improvements made and defects remedied under the supervision of the Sanitary Inspector :—

TABLE 94.

DWELLING HOUSES.

Water supply improved	301
Cleansed and limewashed	0
Overcrowding abated	7
Damp and defective house, walls, roofs, etc.	580
Defective gutters and down-spouts	540
Cleansing dirty floors	44
,, ,, woodwork	1
,, ,, dirty yards	117
,, ,, bedding	12
,, ,, windows	2
,, ,, gully traps	65
,, ,, cellar areas	3
Obstructive buildings removed	4
Defective sink waste pipes	83
Defective dishstones	166
Waste pipes disconnected from drain	2
Yards and passages reflagged	2
Flooding of houses	0
Yards badly paved or flagged	75
Insufficient ventilation of rooms	—
Defective chimney flues	25
Window sash frames, cords, internal walls, ceilings, floors, stairs, fireplaces, doors, cupboards to be repaired	995
Dangerous and defective chimney stacks	79
Fractured internal walls	7
Gas pipes repaired	11
Water pipes repaired	38
Yard division walls	90
Defective and bulging external walls	47
Dry rot	—

BAKEHOUSES.

Cleansed and limewashed	79
Sanitary accommodation improved	1
Drains repaired	8
Animals removed	—
Other nuisances abated	13

DAIRIES, COWSHEDS, AND MILKSHOPS.

Reconstructed	—
Middensteads	—
Floors repaired	—
Improved Lighting	1
Improved ventilation	1
Improved drainage	—
Cubic space increased	—
Internal walls and ceilings repaired	—
Improved yard space	—
Dairy	1

ICE CREAM MANUFACTORIES.

Cleansing and limewashing	34
Sanitary conditions improved	6

TENTS, VANS, SHEDS.

Vans removed from ground	7

SCHOOLS.

Playgrounds—repairs to drains	1
,, repairs to asphalte.	1
,, repairs to paving	—
,, repairs to flags	—
Urinals repaired or improved	1
Sanitary accommodation repaired or improved	1

WORKSHOPS & WORKPLACES.

Cleansed and limewashed	39
Provided with sufficient sanitary accommodation	1
Sanitary condition improved	15
Ventilation improved	—
Overcrowding abated	—
Drains repaired	—
Other nuisances abated	83

DRAINS.

Re-constructed	3
Re-layed with cement joints	244
Cleansed or repaired	308
Under houses (abolished)	—
Opened out for inspection	308
Connected to sewer	—
Intercepting traps provided	—
Soil pipes repaired	2
Inspection chambers built	—
Self-cleansing gullies furnished	149

WATER CLOSETS.

Cleansed	144
Repaired	110
Cisterns and flushing fittings repaired	319
Provided in substitution of slop-water closets	47

PRIVY MIDDENS.

Nuisances abated	—

PAIL CLOSETS.

Nuisance abated	—
Converted to W.C.'s	2
Tipplers converted to pedestal wash-down	31

TABLE 94—(*Continued*).

OFFENSIVE TRADES PREMISES.

Limewashed	32

COMMON LODGING-HOUSES.

Cleansed and limewashed	17
Total nuisances abated	21

OFFENSIVE ACCUMULATIONS.

Removed	144

ANIMALS KEPT AS TO BE A NUISANCE.

Nuisances abated	19

SEWERS.

Cleansed	—

SLOP-WATER CLOSETS.

Nuisances abated	—
Converted to W.C.'s	31

ASHPITS.

Abolished	21

ASH RECEPTACLES.

Repaired	17
Portable receptacles provided	164

STABLE PREMISES.

Removing manure	18
Reconstructed middensteads	2

HOUSES LET IN LODGINGS.

Nuisances abated	190

CANAL BOATS.

Cask for water provided	1
Certificates renewed	2

Details of Inspection Work.

Schools	21
Hospitals	—
Tents, Vans, Sheds	582
Factories	511
Workshops	2387
Workplaces	312
Bakehouses—Ordinary	1022
Underground	4
Cowsheds	79
Dairies and Milkshops	1736
Ice Cream Premises	185
Offensive Trade Premises	539
Fried Fish Shops	495
Common Lodging Houses	747
Stable Premises	865
Offensive Accumulations	18
Animals so kept as to be a nuisance	19
Sewers	10
Street Gullies	339
Canal Boats	102
Smoke Observations	51
Theatres and Cinemas	166
Houses Let-in-Lodgings	2177
Dirty Houses	110
Common Yards, Back Roads and Passages	8443
Infected Houses	3341
Work in progress	9779
Housing and Town Planning Acts...	3859
Fishmongers and Greengrocers	529
Ashes Receptacles	350
Food Preparing and Storing Places.	31
Outworkers' Premises	13
Enquiries *re* Milk Supply	18
Dwelling Houses *re* Nuisances	3788
Samples of—	
Water procured	17
Milk purchased for Sediment Test	270
Milk purchased for Bacteriological Examination	120
Milk purchased for Bacteriological content	40
Freezing of Closets	—
Labelling of Condensed Milk Tins.	115
Insufficient Water Supply	742
Miscellaneous	247

THE TESTING OF DRAINS.

No. of Smoke Tests	756
No. of Water Tests	282
No. of Colour Tests	187
Breaking Down	133
Inspections made while work was in progress	1325
Total number of Defects found	168
No. of Informal Notices Served	135
No. of Formal Notices Served	24
No. of Defects Completed	147
No. of Defects outstanding at end of 1926	21

TABLE 95.

FACTORIES, WORKSHOPS AND WORKPLACES.

1.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

PREMISES. (1)	NUMBER OF Inspections (2)	Written Notices (3)	Prosecutions (4)
FACTORIES ... ... (Including Factory Laundries)	511	6	...
WORKSHOPS ... ... (Including Workshop Laundries)	2387	32	...
WORKPLACES ... ... (Other than Outworkers' premises)	305	...	...
TOTAL	3203	38	...

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

PARTICULARS. (1)	Number of Defects. Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	Number of offences in respect to which prosecut'ns were instituted. (5)
Nuisances under the Public Health Acts :—				
Want of Cleanliness	38	40	...	...
Want of Ventilation	3	2	...	...
Overcrowding	...	...	...	...
Want of drainage of floors	...	...	...	...
Other Nuisances	45	46	...	...
Sanitary Accommodation :—				
Insufficient...	3	3	...	...
Unsuitable or defective	26	20	...	...
Not separate for sexes	1	...	...	...
Offences under the Factory and Workshops Acts :—				
Illegal occupation of underground bakehouse (s. 101)	2	1	...	...
Other offences ... ... (Excluding offences relating to outwork and offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921.)	80	82	...	...
TOTAL	198	194	...	...

TABLE 96.

FACTORIES.

No sanitary accommodation provided. Notice sent. Not yet provided.

Men's water closets. No intervening ventilated space.

Women's water closets. No proper screen, nor intervening ventilated space. Notice sent. Closets re-arranged and re-constructed. Work done.

No sanitary accommodation provided for the two sexes. Notice sent. New water closet erected.

No intervening ventilated space to w.c. Notice sent. Existing w.c. abolished and new w.c. constructed on 1st floor.

Sanitary accommodation for both sexes to be properly screened off. Women's w.c. to be fitted with proper fastening on inside. Notice sent. Work done.

TABLE 97.

WORKSHOPS.

Effluvia from ash bin in lavatory. Notice sent. Ashbin removed to yard.

Premises appear dirty and to require limewashing again throughout. Notice sent. Premises cleansed.

Premises appear to require limewashing. Notice not required.

Walls and ceiling of workroom require cleansing. Notice not required. Work done.

Workshop requires cleansing. Notice not required. Work done.

Limewashing overdue. Notice not required. Work done.

Limewashing overdue. Notice not required. Work done.

TABLE 98.

DISINFECTION.

Number of Rooms Sprayed			75
Tuberculosis	209		
Fever	438		
Vermin	21		
Institutions	24		
Schools	33		
Others	105		
Articles Disinfected by Steam			8120
Number of Articles Destroyed by Consent of Owners			295
Amount of Disinfectant Distributed :—			
Chloros		(Gallons)	203⅝
Disinfectant Powder			—
" D " Solution		(Quarts)	4
Collection of Typhoid Excreta Pails			—
Persons Cleansed at Disinfection Station			63
Cleansings			146
Library Books Fumigated			100
Private Books Fumigated			29

CLEANSING OF PERSONS.

This is carried out at the Cleansing and Disinfecting Station, Throstle Street. During 1926, 49 persons were given medical baths ; of these, eight were for verminous conditions, and 41 for scabies. The majority of the latter were referred from the School Medical Department.

Of the 49, 18 were under 10 years of age ; 16, 10 to 15 years ; 6, 15 to 20 years ; and 9 over 20 years. The total number of baths given was 131. One patient had 9 baths ; 1, 7 baths ; 2, 6 baths ; 1, 5 baths ; 3, 4 baths ; 19, 3 baths ; 7, 2 baths ; and 15, 1 bath.

In connection with the above cases, four rooms were disinfected, four beds, and 131 suits of clothing were stoved.

WELFARE OF THE BLIND.

Blind Persons Act Committee.

His Worship The Mayor.

Aldermen Fielding (*Chairman*), Greeves (*Vice-Chairman*), Keighley, Watson, Shorrock and Ramsay.

Councillors—

Coward,
Fryars,
J. Holden,
Oddie,
Makin,

Campbell,
Dean,
B. Holden,
Critchley,
Lucas,

Heyes,
Fish,
Hurley,
Bradley,
Grimshaw,

Messrs. D. B. Lawley, A. B. Brain, Councillor Ormerod, E. Greenhalgh and Mrs. Coggins.

THE BLIND PERSONS ACT, 1920.

Scheme for Carrying Out the Duties Imposed by Section 2, Sub-Section 1, of the Blind Persons Act, 1920.

The Act is administered in Blackburn by the Town Council, who receive recommendations from a Committee consisting of 23 members of the Town Council and four non-Council members who are qualified by training or experience in matters relating to the blind.

Full details of the Scheme were given in my Report for 1925, and no alterations were made thereto during 1926. It is hoped in the near future to evolve a practical scheme of co-operation between the Workshops for the

Blind and the Blackburn and Darwen Visiting Society for the Blind. It is desirable that closer working between these two societies be obtained, as it will mean no duplication of voluntary collections, and also increased grants from the Ministry of Health. As the activities of both the Societies concerned cover a wider area than the County Borough, the Lancashire County Council are working with the County Borough in the formulation of a scheme.

The cost of the operation of the present scheme in 1926 was £572.

ULTRA VIOLET LIGHT CLINIC.

The following Table gives the figures in regard to patients treated at the Ultra Violet Light Clinic, held in the Corporation Hospital.

Scientific investigations have proved that the ultra violet rays contained in sunlight exert a pronounced physiological effect upon living tissues.. These rays can be produced artificially by appropriate means. In the Corporation Hospital Clinic there are installed two Carbon Arc lamps, to which was added in September a Mercury Vapour Quartz lamp.

Cases are referred for treatment from the Maternity and Child Welfare, Tuberculosis and School Departments, whilst a few cases have been treated on the request of their private practitioner.

This installation is the only one in any institution in Blackburn at the present time, and has been in use since November, 1925.

The Clinics are held on Monday, Tuesday, Thursday and Friday afternoons from 2 to 4 o'clock.

Maternity & Child Welfare Cases.

Number of Cases Treated	(Individuals)	37
,, Attendances they have made		1123
,, Exposures given		1141
Average Duration of Exposures	(Minutes)	60
Number of Cases Treated by Carbon-Arc only		34
,, ,, ,, Hg Vapour only		—
,, ,, ,, both Carbon-Arc and Hg Vapour		3
,, Exposures by Carbon-Arc only		1123
,, ,, Hg Vapour only		—
,, ,, both Carbon-Arc and Hg Vapour		1141

CONDITIONS TREATED :—

	M.	F.
Enlarged Cervical Glands	..	1
Tubercular Peritonitis	2	1
Lupus (Rickets)	16	6
Debility	5	3
Other Conditions	2	1

RESULTS ACHIEVED :—

	Cured	*Much Improved*	*No improvement*	*Worse*	*Still under Treatment*
Enlarged Cervical Glands	1	..	..	..	..
Tubercular Peritonitis	..	1	...	..	2
Lupus (Rickets)	5	5	...	..	12
Debility	2	4	...	..	2
Other Conditions	..	..	..	..	3

Total Number of Children under Treatment :—	*Jan. 1st,* 1926	*Dec. 31st,* 1926
Carbon-Arc only	..	16
Hg. Vapour only	..	..
Both	..	3

	Cured	*Much Improved*	*Improved*	*Worse*
No. of children discharged during 1926	8	10	..	—

No. of Children Invited but Never Attended	—
,, ,, and Attended once only	4
,, ,, ,, made less than 5 attendances	5
,, ,, ,, ,, 10 attendances	3
,, ,, ,, made more than 10 attendances	25

TUBERCULOUS CASES.

Number of Cases Treated .. (Individuals)	32
,, Attendances they have made	1596
,, Exposures given	1619
Average duration of Exposures (Minutes)	60
Number of Cases Treated by Carbon-Arc Only	17
,, ,, ,, Hg. Vapour Only	2
,, ,, ,, both Carbon-Arc and Hg. Vapour	13
,, Exposures by Carbon-Arc Only	1419
,, ,, Hg. Vapour Only	23
,, ,, both Carbon-Arc and Hg. Vapour	1596

CONDITIONS TREATED :—

	M.	F.
Enlarged Cervical Glands	4	5
Tubercular Peritonitis	7	4
Lupus	1	..
Debility	4	..
Other Conditions	7	..

RESULTS ACHIEVED :—

	Cured	Much Improved	No improvement	Worse	Still under Treatment
Enlarged Cervical Glands	3	3	..	..	3
Tubercular Peritonitis	6	..	..	..	5
Lupus	..	..	..	..	1
Debility	4	..	..	..	..
Other Conditions	3	2	..	..	2

Total No. of Children under Treatment :—	Jan. 1st, 1926	Dec. 31st, 1926
Carbon-Arc	4	1
Hg. Vapour	..	3
Both	..	7
	4	11

	Cured	Much Improved	Improved	Worse
No. of Children Discharged during 1926	16	5	..	..

No. of children invited but never attended	—
,, ,, and attended once only	—
,, ,, and made less than 5 attendances	2
,, ,, and made less than 10 attendances	—
,, ,, and made more than 10 attendances	30

SCHOOL MEDICAL SERVICE CASES.

Number of School Children Treated (Individuals)	5
,, Attendances they have made	242
,, Exposures Given	245
Average Duration of Exposures (Minutes)	60
Number of School Children Treated by Carbon-Arc only	2
,, ,, ,, ,, Hg. Vapour only	—
,, ,, ,, ,, Both Carbon-Arc and Hg. Vapour	3
,, Exposures by Carbon-Arc only	206
,, ,, Hg. Vapour only	—
,, ,, Both Carbon-Arc and Hg. Vapour	245

CONDITIONS TREATED :—

	M.	*F.*
Enlarged Cervical Glands	1	2
Tubercular Peritonitis	1	—
Lupus	—	—
Debility	—	—
Other Conditions (Hæmophlia)	1	—

RESULTS ACHIEVED :—

	Cured	*Much Improved*	*No Improvement*	*Worse*	*Still under Treatment*
Enlarged Cervical Glands	1	—	—	—	2
Tubercular Peritonitis	—	—	—	—	1
Lupus	—	—	—	—	—
Debility	—	—	—	—	—
Other Conditions (Hæmophlia)		—	—	—	1

Total No. of Children under Treatment :—	*Jan. 1st,* 1926	*Dec. 31st,* 1926
Carbon-Arc	—	1
Hg. Vapour	—	—
Both	—	3
		4

	Cured	*Much Improved*	*Improved*	*Worse*
No. of Children discharged during 1926	1	—	—	—

No. of Children Invited but Never Attended	*Nil.*
,, ,, ,, and attended once only	*Nil.*
,, ,, ,, and made less than 5 attendances	*Nil.*
,, ,, ,, and made less than 10 attendances	*Nil.*
,, ,, ,, and made more than 10 attendances	5

OTHER CASES.

Number of Cases Treated	(Individuals)	11
,, Attendances they have made		302
,, Exposures Given		304
Average Duration of Exposures	(Minutes)	60
Number of Cases Treated by Carbon-Arc only		8
,, ,, ,, Hg. Vapour only		2
,, ,, ,, Both Carbon-Arc and Hg. Vapour		1
,, Exposures by Carbon-Arc only		278
,, ,, Hg. Vapour only		26
,, ,, Both Carbon-Arc and Hg. Vapour		304

CONDITIONS TREATED :—

	M.	F.
Enlarged Cervical Glands	1	—
Tubercular Hip	—	2
Lupus	1	1
Debility..	1	3
Other Conditions (Encephalitis lethargica)	1	—

RESULTS ACHIEVED :—

	Cured	Much Improved	No Improvement	Worse	Still under Treatment
Enlarged Cervical Glands ..	—	1	—	—	—
Tubercular Hip	—	—	1	—	1
Lupus	—	—	—	—	2
Debility	—	1	—	—	3
Other Conditions (Encephalitis lethargica)	—	1	—	—	1

	Jan. 1st, 1926	Dec. 31st, 1926
Number of Children under Treatment :—		
Carbon Arc	—	4
Hg. Vapour	—	2
Both	—	1
Total Number of Children under Treatment ..		7

	Cured	Much Improved	Not Improved	Worse
No. of Children Discharged during 1926	—	3	1	—

No. of Children invited but never attended	—
,, ,, and attended once only	1
,, ,, and made less than 5 attendances	1
,, ,, and made less than 10 attendances	—
,, ,, and made more than 10 attendances	9

VOLUNTARY AGENCIES.

The voluntary agencies co-operating with the Public Health Department have continued their useful work during the year. The Blackburn Corporation have an agreement with the Blackburn and District Nursing Association to undertake domiciliary nursing of cases of Measles, Whooping Cough, Diarrhœa, Puerperal Fever, Ophthalmia Neonatorum, Influenzal Pneumonia, etc., for which a retaining fee of £35 per annum is paid, together with an additional 8d. per visit. The following Table gives the work carried out by the Blackburn and District Nursing Association in this respect during the year 1926 :—

TABLE 99.

Home Nursing by District Nurses.

Disease	On books Jan. 1st 1926	New Cases	Cured	Died	Hospital	Remaining end of 1926	Visits
Tuberculosis	6	29	7	17	6	5	1695
Pneumonia	4	84	65	11	7	5	1738
Whooping Cough ..	2	5	7	..	..	..	190
Puerperal Fever and Pyrexia ..	—	6	3	3	..	..	115
Ophthalmia Neonatorum ..	1	9	10	..	..	..	204
Diarrhœa	..	2	2	..	..	..	14
Total	13	135	94	31	13	10	3956

The Voluntary Workers at the Maternity and Child Welfare Centres continued to give their services and have been of very great assistance to the Health Department at the Centres during the year.

The National Society for the Prevention of Cruelty to Children also visited cases when requested by the Medical Officer of Health, and the help afforded has been most valuable.

The Blackburn Charity Organisation Society does useful service in helping the needy sick of the town. They maintain a Convalescent Home at St. Annes, with 32 beds for men and 32 for women. Over 1,000 patients were admitted during 1926. The Society also arranges for children to go to the Ormerod Home for children at St. Annes. Free fireguards are supplied to necessitous families with young babies, on the recommendation of the Health Visitors of the Public Health Department. Clothing is given to persons going into Sanatoria and to children entering hospitals. There is also a special fund, given by the Blackburn High School Old Girls' Association, for helping Tuberculosis cases by cash grants. In all these activities the Society comes into contact with the Health Department, and the assistance they have rendered has been very valuable.

PUBLICITY AND EDUCATION ON HEALTH.

The work of the Publicity Committee on Health has been continued during the year. A Health Week was held from February 23rd to the 28th, inclusive. The scheme was, to hold comparatively small meetings in various parts of the town; in other words, to go to the people we wanted to reach, and not to expect them to come to us.

Large popular meetings held in a central hall are useful, but they only attract those people who are already interested in the subject dealt with; those not interested, or indifferent, will not attend. The district meetings were held, in most instances, in the same premises as were used for Maternity and Child Welfare Clinics, and by this means the audiences, although comparatively small, were composed of persons to whom a Health Message was likely to fall on new ground.

Addresses were also given, during Health Week, in some of the larger mills, whilst two mass meetings were held on Sunday, February 28th, as the conclusion of the Health Week. Both these meetings were crowded out.

The following is a list of the Lectures, Talks, etc., given during the year 1926:—

Date.		*Where Held.*	*Lecturer.*	*Attendance.*
Jan.	13	St. John Ambulance Association	B.	100
,,	19	Park Road Girls' School	M.O.H.	50
,,	24	Men's Adult School	M.O.H.	25
,,	26	Co-operative Society, Men's Guild	M.O.H.	70
Feb.	10	St. John Ambulance Brigade	G.	100
,,	22	St. Thomas' Mutual Improvement Class	M.O.H.	100
,,	23	Imperial Mill—Dinner Time Talk	Health Week.	200 Mixed
,,	23	Belper St. Co-operative Hall, 3-30 p.m.		100 Women
,,	23	Belper St. Co-operative Hall, 7-30 p.m.		500 Mixed
,,	24	St. Alban's Hall, 10-30 a.m.		1000 Catholic Children
,,	24	Hollin Bank Mill—Dinner Time Talk		120 Mixed
,,	24	St. Philip's Parochial Hall, 3-30 p.m.		82 Women
,,	24	St. Philip's Parochial Hall, 7-30 p.m.		300 Mixed
,,	25	Northrop Loom Coy.—Dinner Time Talk		300 Mixed
,,	25	Montague Street P.M. School, 3-30 p.m.		60 Women
,,	25	Montague Street P.M. School, 7-30 p.m.		300 Mixed
,,	26	Queen's Hall, 10 a.m.		2200 Children
,,	26	Queen's Hall, 11 a.m.		1300 Children
,,	26	Griffin Mill—Dinner Time Talk		600 Mixed
,,	26	School Street School, 3-30 p.m.		50 Women
,,	26	School Street School, 7-30 p.m.		200 Mixed
,,	27	Queen's Hall, 8 p.m.		2000 Mixed
,,	28	New Prince's Theatre, 3 p.m.		2500 Men
,,	28	New Prince's Theatre, 8 p.m.		2800 Mixed

Date.	*Where Held.*	*Lecturer.*	*Attendance.*
Mar. 8	Blackburn Horse Show	B.	100
,, 8	Co-operative Women's Guild	M.	80 Women
Oct. 7	Dewsbury Health Week	M.O.H.	250 Mixed
,, 11	St. Stephen's Conservative Club	M.O.H.	120 Men
,, 13	Domestic Science Teachers	M.O.H.	18 Women
,, 20	Boy Scouts Association	R.	30
,, 24	Friends' Adult School	M.O.H.	25 Mixed
Nov. 2	St. John Ambulance Brigade	R.	80 Mixed
,, 2	Co-operative Society Mixed Guilds	M.O.H.	160 Mixed
,, 3	Leamington Road Women's Guild	M.	40 Women
,, 11	Women's Institute, Mellor Brook	H.	60 Women
,, 23	Park Road Women's Guild	M.O.H.	50 Women
,, 25	Furthergate Working Men's Club	M.O.H.	200 Men
,, 30	Co-operative Women's Guild	M.O.H.	120 Women
Dec. 7	St. John Ambulance Brigade	H.	100 Mixed

M.O.H.	Lectures by Medical Officer of Health.
H.	,, Dr. Hogg (Assistant M.O.H.).
R.	,, Dr. Roe (Assistant M.O.H.).
M.	,, Dr. Mackenzie (Assistant M.O.H.).
B.	,, Mr. Burndred (Veterinary Inspector).
G.	,, Mr. Graham (Chief Sanitary Inspector).

The Health Visitors have continued the Talks to Mothers at the Centres. Six Lectures every fortnight have been delivered throughout the year, except during the summer quarter.

The Talks by various Health Visitors to school children attending the Domestic Science Centre were also continued throughout the year.

LOCAL POWERS RELATING TO PUBLIC HEALTH.

1.—Blackburn Corporation Acts and Orders :—

The Blackburn Improvement Act, 1882.
The Blackburn Water Act, 1885.
The Blackburn Corporation Act, 1892.
Local Government Board's Provisional Orders Confirmation (No. 14) Act, 1894.
Local Government Board's Provisional Orders Confirmation (No. 18) Act, 1897.
The Blackburn Corporation Act, 1901.
The Blackburn Corporation Act, 1908.
Local Government Board's Provisional Orders Confirmation (No. 9) Act, 1910.
The Blackburn Corporation Water Act, 1911.
Local Government Board's Provisional Orders Confirmation (No. 1) Act, 1919.
The Blackburn Corporation Act, 1922.

2.—ACTS OF PARLIAMENT ADOPTED BY THE COUNCIL :—

Parts II. & III. of the Public Health Acts (Amendment) Act, 1890, adopted by the Town Council, 2nd April, 1891.

INFECTIOUS DISEASES (PREVENTION) ACT, 1890, adopted by the Town Council (except Sections 14 and 19), 5th March, 1891.

Part III. of the Housing of the Working Classes Act, 1890, adopted by the Town Council, 5th August, 1897.

Public Health Acts Amendment Act, 1907 : Certain sections adopted by Orders of the Local Government Board on the 5th December, 1908 ; 5th January, 1910 ; and by Order of the Secretary of State, dated 27th October, 1909.

3.—BYE-LAWS AND REGULATIONS IN FORCE IN THE BOROUGH :—

General Bye-Laws, dated 12th January, 1855.

Bye-Laws for Regulation of Private Slaughterhouses, 25th October, 1877.

Regulations for Preventing Waste, Misuse, or Contamination of Water, 17th December, 1887.

Bye-Laws *re* Common Lodging Houses, 6th September, 1888.

Bye-Laws made under the Contagious Diseases (Animals) Act, 1878 to 1890, and the Dairies, Cowsheds, and Milkshops Orders of 1885 and 1886, 5th July, 1893.

Bye-Laws *re* Houses Let in Lodgings, 4th April, 1895.

Bye-Laws for Regulation of Offensive Trades, 4th March, 1897.

Bye-Laws with Respect to Management and Charges for Slaughterhouses Established by the Council, 20th March, 1901.

Bye-Laws for the Prevention of Carrying Carcases through the Streets, 25th April, 1901.

Bye-Laws *re* Cattle Markets, 1st June, 1905.

Regulations made under the Diseases of Animals Acts, 1894 to 1903 and Lancashire (Parasite Mange) Order, of 1908, 9th February, 1910.

Regulations made under the Diseases of Animals Acts and Glanders or Farcy Order of 1920, 17th February, 1921.

County Borough of Blackburn Offensive Trades Confirmation Order, 1922, declaring Rag and Bone Dealing to be an Offensive Trade.

Bye-Laws *re* Tents, Vans, Sheds and Similar Structures, 15th May, 1924.

Bye-Laws *re* Houses Let in Lodgings, 20th June, 1924.

MINISTRY OF HEALTH ORDERS, ETC., 1926.

STATUTES :—

Midwives and Maternity Homes Act, 1926.

ORDERS :—

No. 552 .. The Sanitary Officers Order, 1926.
,, 821 .. The Milk and Dairies Order, 1926.

REGULATIONS :—

No. 820 .. The Public Health (Imported Milk) Regulations, 1926.
,, 971 .. The Public Health (Ophthalmia Neonatorum) Regulations, 1926.
,, 922 .. The Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926.

CIRCULARS :—

No. 680	Dated 22/3/26	Training and Appointment of Health Visitors.
,, 681	,, 29/3/26	Training and Employment of the Blind.
,, 682	,, 18/3/26	Voluntary Collections for the Blind.
,, 701	,, 29/5/26	Sanitary Officers Order, 1926.
,, 698	,, 10/5/26	Supervision of Smallpox Contacts.
,, 708	,, 23/6/26	Public Health (Imported Food) Regulations, 1925.
,, 711	,, 12/7/26	Public Health (Imported Milk) Regulations, 1926.
,, 713	,, 14/7/26	Public Health (Imported Food) Regulations, 1925.
,, 715	,, 19/7/26	Smallpox.
,, 718	,, 23/7/26	Public Health (Tuberculosis) Regulations, 1912.
,, 617	,, 9/8/26	Notification and Treatment of Ophthalmia Neonatorum
,, 617a	,, 9/8/26	Notification and Treatment of Ophthalmia Neonatorum
,, 722	,, 9/8/26	Puerperal Fever and Puerperal Pyrexia.
,, 724	,, 16/8/26	The Midwives and Maternity Homes Act, 1926.
,, 716	,, 16/9/26	Cancer.
,, 726	,, 5/10/26	Treatment of Tuberculosis—Returns under Memo. 30T.
,, 726a	,, 5/10/26	Treatment of Tuberculosis—Returns under Memo. 30T.
,, 736	,, 4/10/26	Provision of Facilities for Practical Training of Candidates for Sanitary Inspectors' Certificate.

MEMORANDA :—

MINISTRY OF AGRICULTURE AND FISHERIES.

ORDERS :—

No. 56	Diseases of Animals.—The Markets, Sales, and Lairs Temporary Order of 1926.
,, 42	The Foot and Mouth Disease (Packing Materials) (Amendment) Order of 1926.
,, 372	Diseases of Animals.—Suspension of Disinfection Order of 1925 until July 1st, 1926.
,, 373	Provision of Approved Killing Instruments by Vessels of which Animals are Carried.
,, 513	The Sheep Dips (Regulations) Order of 1926.
,, 545	The Diseases of Animals (Disinfection) Order of 1926.
,, 546	The Markets, Sales, and Lairs (Amendment) Order of 1926.
,, 572	The Sheep Dipping (Regulation) Order of 1926.